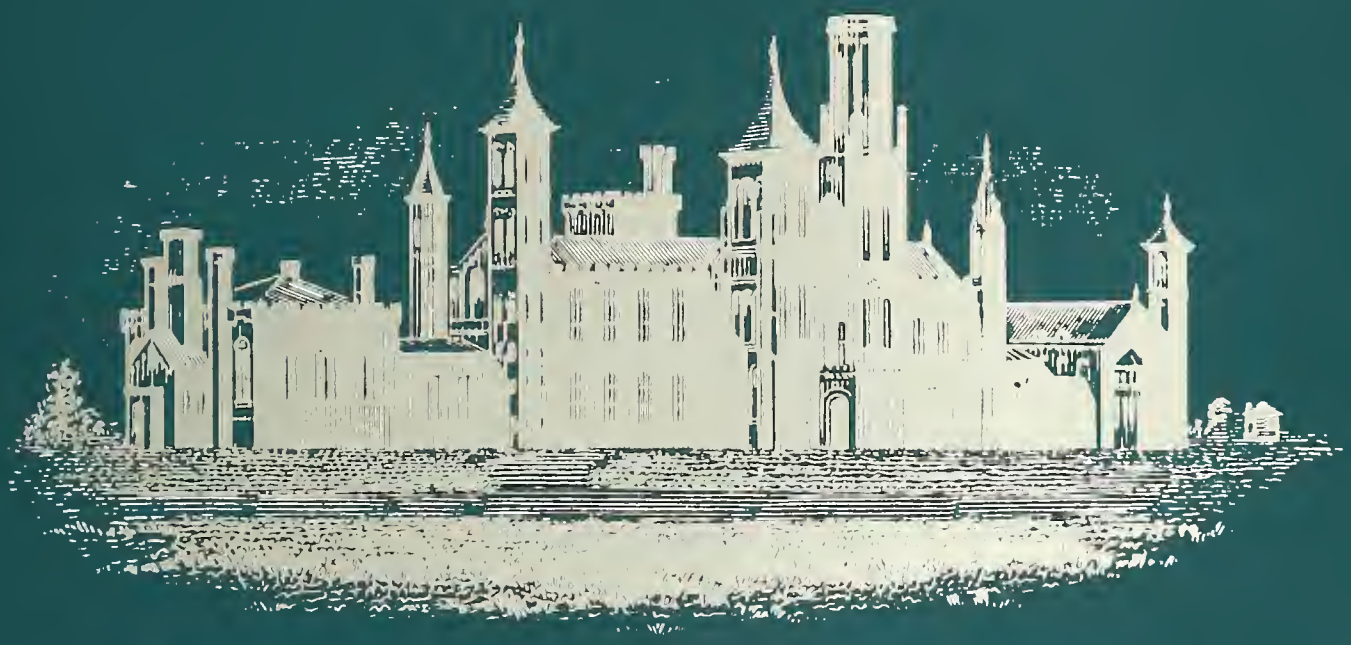
Fiscal Year 1995

Budget Request to OMB



ADMINISTRATIVELY CONFIDENTIAL
(Information not to be released until after the President's Budget is submitted to the Congress in 1994)

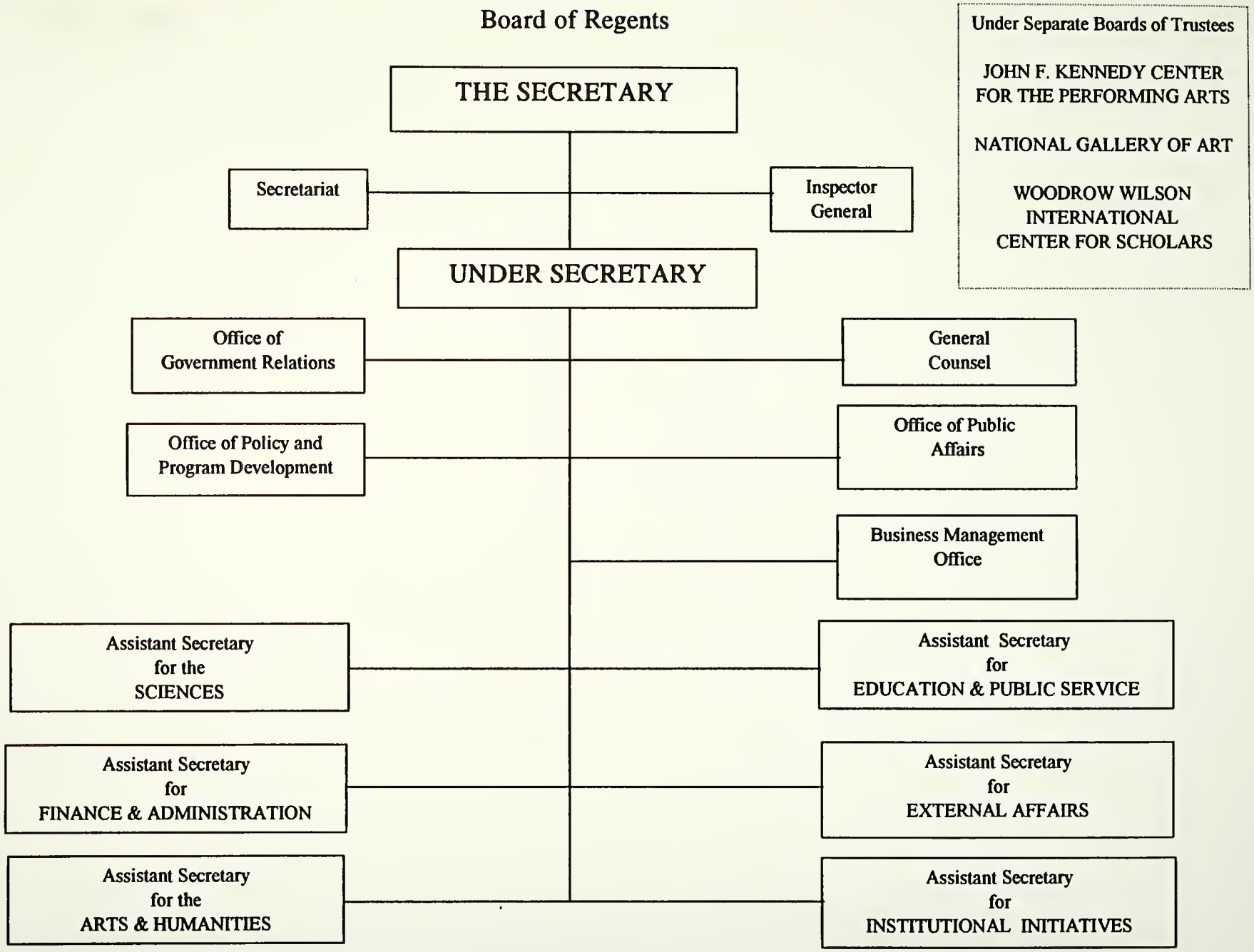
Smithsonian Institution
September 1993

SMITHSONIAN INSTITUTION

FISCAL YEAR 1995

Budget Request to Office of Management and Budget

SMITHSONIAN INSTITUTION
Board of Regents



July 1993

Smithsonian Institution
Bureaus and Offices

Assistant Secretary for the ARTS & HUMANITIES

Anacostia Museum
Archives of American Art
Arthur M. Sackler Gallery and
  Freer Gallery of Art
Cooper-Hewitt, National Museum of Design
Hirshhorn Museum and Sculpture Garden
Institutional Studies Office
National Air and Space Museum
National Museum of African Art
National Museum of American Art
  Renwick Gallery
National Museum of American History
  National Postal Museum
National Museum of the American Indian
National Portrait Gallery
Office of Exhibits Central
Office of Museum Programs
Office of Quincentenary Programs
Smithsonian Institution Traveling
  Exhibition Service

Assistant Secretary for FINANCE & ADMINISTRATION

Office of the Comptroller
Office of Contracting and Property Management
Office of Equal Employment and Minority Affaira
Office of Facilities Servicea
  Office of Architectural History and Historic
    Preservation
  Office of Design and Construction
  Office of Environmental Management and Safety
  Office of Plant Services
  Office of Protection Services
Office of Financial and Management Analysia
Office of Human Resources
Office of Information Resource Management
Office of Planning and Budget
Office of Printing and Photographic Servicea
Office of Risk Management
Office of Sponsored Projects
Office of the Treasurer
Ombudsman
Travel Services Office

Assistant Secretary for the SCIENCES

Conservation Analytical Laboratory
National Museum of Natural History
  Museum Support Center
National Zoological Park
Office of Fellowships and Grants
Office of Smithsonisn Institution Archives
Smithsonian Astrophysical Observatory
Smithsonian Environmental Research
  Center
Smithsonian Institution Libraries
Smithsonian Tropical Research Institute

Assistant Secretary for EDUCATION & PUBLIC SERVICE

Center for Folklife Programs and
  Cultural Studiea
National Science Resources Center
Office of Elementary and Secondary
  Education

Assistant Secretary for EXTERNAL AFFAIRS

Office of International Relations
Office of Special Events and Conference
  Servicea
Office of Telecommunications
The Smithsonisn Associates
  National Program
  Resident Program
Smithsonian Institution Press
Smithsonian Magazine
Air & Space Magazine
Visitor Information and Associates'
  Reception Center

Assistant Secretary for INSTITUTIONAL INITIATIVES

National Campaign for the National
  Museum of the American Indian
Office of Development

July 1993

SMITHSONIAN INSTITUTION
FISCAL YEAR 1995 BUDGET REQUEST TO OMB

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SMITHSONIAN INSTITUTION
FY 1995 BUDGET REQUEST
($000's)

APPROPRIATION ACCOUNT	FY 1994 BASE	FY 1995 REQUEST
Salaries and Expenses	$299,649	$325,054
Construction	10,400	62,747
Zoo Construction	5,400	8,400
Repair and Restoration	24,000	35,000
TOTAL	$339,449	$431,201

INTRODUCTION

Over the past three years, it had become increasingly clear that the Institution, like many for-profit, not-for-profit, and government organizations throughout the United States, was entering a period that would require difficult decisions. While private industry has typically responded to changing market conditions by expanding and contracting, the nonprofit sector, skilled at expansion, has little experience, and virtually no tools, to undertake contraction.

The Smithsonian has enjoyed unparalleled growth since the end of World War II. The Institution has grown dramatically, from a place in 1946 primarily for scientists and scholars -- not the public -- to one of the primary attractions in the Nation's Capital for America's families. In these intervening years, the Smithsonian's special partnership with the Federal government and private donors has fostered its cultural and scientific aspirations and allowed it to grow into a resource of great diversity and richness for the Nation.

In 1946, annual public visitation to the Smithsonian's four buildings on the Mall totaled approximately 2 million people. By 1955 that number had grown to 3.9 million; by 1976, to 17 million; and by 1992, to 26.6 million. Today, the public can visit 9 Smithsonian museums on the Mall and 6 Smithsonian sites elsewhere in Washington. Among the top ten most frequently cited places to visit in the District of Columbia, four are Smithsonian sites; the top two are Smithsonian sites. At the same time, the Smithsonian reaches far beyond the confines of the Capital. The results of the research it conducts at sites around the world are shared throughout the international scientific community and are helping shape the survival plans for the planet. For the price of an annual membership, the Smithsonian magazine enters over 2 million households and is read by 9 million people every year. Smithsonian Institution Traveling Exhibition Service exhibits are seen by 11 million Americans annually through some hundred

exhibitions at any given time, located in large and small museums, schools, libraries, municipal and other public spaces in all fifty states. All of this for a grand total annually of slightly less than $600 million for operations from all sources ($332 million from Federal sources), a tiny percent of the total Federal budget; no more than the annual budget of many flagship state universities.

The Smithsonian community can point with pride to the results of the application of its resources--to the quality and depth of its research, the quality and range of its collections, and the quality and relevance of its presentations through exhibitions and other forms of outreach. Recently, however, constraints on all of its sources of income, stemming from the sluggish national economy, have forced it to seek financial equilibrium by joining the restructuring efforts that have already swept private industry and much of the not-for-profit world.

RESTRUCTURING PROCESS

By the summer of 1992, the Smithsonian was forced to acknowledge that continued growth and strength in the future would require tradeoffs and wise choices through careful assessment of priorities. Toward that end, it undertook a restructuring process. By the time the FY 1994 Request to OMB was submitted, it was clear that the effort would require flexibility to begin making choices, according to its highest priorities, among equally appealing and valid alternatives. Only by gaining financial equilibrium in both its Federal and Trust budgets, undertaking strategic financial planning, focusing programmatic efforts tightly, and providing adequate supporting infrastructure could the Institution move confidently and decisively through this difficult period and position itself for the next century. Within the framework of its priorities, detailed later in the Budget Priorities section, in-depth discussions and reallocation decisions were undertaken.

In consultation with OMB and the chairs of the Senate and House subcommittees on Appropriations, the Institution was given sufficient flexibility in the FY 1993 process to proceed with restructuring and was able to reprogram approximately 5 percent of its total FY 1993 Salaries and Expenses appropriation as the first phase of the restructuring plan. At the same time there was acknowledgement of the need to accomplish the restructuring goals over more than one fiscal year in order to minimize disruption that could result from a hasty, ad hoc process to reduce the workforce. The Smithsonian hoped to provide the same outcome -- a leaner workforce applied to the highest priorities of the Institution -- through its restructuring efforts. But it needed time for subsequent phases to unfold in a logical and informed manner. A series of studies designed to inform that next phase have been undertaken. In particular, a position management study will assist in planning the transition to a different workforce for the future--more focused, more diverse, more technologically sophisticated. A restructuring of the finance and administration area will provide more efficient delivery of services, while a streamlining of the exhibition development process promises considerable efficiencies.

In order to work within the current constrained environment and to minimize the disruptions to the restructuring process underway, the Institution has examined each program request carefully. Despite economies attained through the restructuring efforts, the Institution is not without needs. Increases in mandatory costs continue. Unlike most Federally funded agencies, the Smithsonian must assume the costs of rent, utilities, maintenance and renewal of facilities. The requirements to service and maintain its facilities consumes nearly 15% of its Salaries and Expense budget; the need to protect and secure the National Collections and provide a safe environment for personnel and the general public 364 days a year consumes more than 10 percent of that budget; and the need to make the collections accessible to a broader audience is a looming cost yet to be addressed fully. In addition, the Smithsonian is not a granting agency--it does not administer programs that can be resized easily. At the same time, its primary investment must be in human resources -- the talented and committed men and women who undertake research, care for and articulate the richness of the National Collections -- the professionals, the technicians, and the specialists, as well as the administrative, plant and security personnel who support them.

In many cases, the Smithsonian's administrative structures have not grown quickly enough in size or sophistication to keep pace with the requirements of its programs. The catch-up process has not always been systematic. Modernizing both structure and systems in the face of downsizing will require agility and closer coordination, teamwork, and more effective application of technology to reduce dependence on manpower and repetitive manual processes.

The Smithsonian must have a stable infrastructure provided by a stable base of funding to address ongoing, recurring needs, e.g., facilities renewal; replacement of research equipment; enhancements of computing/information resources, including collections management; and major scientific instrumentation for specialized requirements not available "off the shelf." As the costs for these requirements escalate, the Institution must rely on the Office of Management and Budget and the Congress to provide assistance in these areas. While the Smithsonian will look to more focused programs, and improved administrative processes, it will also seek more creative means of providing for major endeavors, including public/private partnerships, enhanced fund-raising efforts, and joint ventures for facilities and unique projects. At the same time, certain commitments, especially for construction projects, must be met. For example, Federal funding for the National Museum of the American Indian construction projects must move in tandem with the National Campaign for the Mall museum or momentum in the donor community will be lost.

FY 1995 BUDGET PRIORITIES

The Smithsonian's FY 1995 budget request has been shaped by the priorities for the Nation. Many of the Smithsonian's programs, especially as they are being reshaped in its ongoing restructuring efforts, will be both congruent with and complementary to the Administration's vision for the Nation.

The Smithsonian Institution's request for all operating and capital budget accounts in FY 1995 totals $431.2 million, $91.8 million over the FY 1994 base. Of this amount, $325.1 million is for the Salaries and Expenses account, the Institution's basic operating budget; $62.7 million for the Construction account; $35 million for the Repair and Restoration of Buildings account; and $8.4 million for the Construction and Improvements, National Zoological Park account.

SALARIES AND EXPENSES - The Salaries and Expenses (S&E) request of $325.1 million and 4,761 workyears represents a net increase of $25.4 million over the FY 1994 requested level. Of this requested increase, $7.8 million is to cover increases in mandatory cost items such as utilities, space rental, and the legislated pay raises. Program increases account for $17.6 million of the requested Salaries and Expenses account.

The program increases, detailed in the individual bureau and office sections that follow, reflect the six Institutional priorities that have guided the restructuring process. These priorities with corresponding requests for increase are:

- the care and conservation of the collections and facilities ($3.0 million);
- the retention of a vibrant, broadly appealing exhibition program ($600,000);
- the maintenance of momentum in major research programs where the Institution has a strong tradition and comparative advantage ($1.6 million);
- meeting mandated responsibilities of access and safety ($1.8 million);
- the provision of an adequate administrative and service base ($2.1 million);
- and the retention of key outreach programs to broaden audiences and to contribute to an understanding of global change ($700,000).

Phase I of the Restructuring Plan called for the creation of two Institution-wide funds, to support highest priority needs for research equipment and information management, with special focus on the information needs for collections management. In this request the Institution is seeking to increase each of these funds by $3.4 million

and to request them as no-year funds to provide for a permanent program for systematic replacement and acquisition of these resources. The application of this concept of Institution-wide funds has already proven so useful and successful that the Institution is requesting creation of an additional fund of $1.0 million for Latino programming.

Of the total FY 1995 S&E budget, the Institution requests that funds for certain activities remain available until expended. These funds support the research equipment and information management pools, the major scientific instrumentation program, collections acquisition, Museum Support Center equipment and move, exhibition reinstallation, the National Museum of the American Indian, the repatriation program at the National Museum of Natural History, the Renewal/Acquisition Program for research equipment and information management, and the Latino Exhibitions, Acquisitions, and Educational Programming.

FACILITIES:

Construction - The Smithsonian's request for the Construction program for FY 1995 totals $62.7 million, including $4.0 million for planning and design for the Air and Space Extension, $45.5 million for design and construction for the facilities of the new National Museum of the American Indian, $8.7 million for completing the Natural History Building's East Court project, and $4.0 million for projects involving minor construction and/or modifications to existing buildings. The Institution also requests $0.5 million for FY 1995 to continue planning for future construction projects.

Construction and Improvements, National Zoological Park - The request for the construction program at the National Zoological Park for FY 1995 is $8.4 million, including $3.25 million to fund the highest priority repair and renovation projects at the Rock Creek Park site and Front Royal, Virginia; $4.65 million for major construction at Rock Creek, including completion of the Aquatic Trail - Living in Water phase of the Zoo's Aquatic Habitats, completing design and initial site preparation on the Grasslands Exhibit, and designing and beginning construction of the electrical system replacement at Rock Creek; and $0.5 million to design a new, prefabricated building to consolidate maintenance, grounds, transportation, supply, and commissary operations into a single location at the Conservation and Research Center at Front Royal, Virginia.

Repair and Restoration of Buildings - The Institution is requesting $35.0 million for the Repair and Restoration account. The Smithsonian's commitment to the maintenance and renovation of its facilities continues as a high priority in the FY 1995 budget. This request brings the Institution to the projected optimal annual level for the R&R account. The Institution must continue its scheduled program of facilities renewal in its various facilities and protect the integrity of its physical infrastructure. The request includes $14.5 million for the Major Capital Renewal program and $20.5 million for Repair, Restoration, and Code Compliance projects.

Nonappropriated Sources of Funding

In addition to support provided by Federal appropriations, the Institution receives nonappropriated funds to expand and enrich its programs. The Institution presents nonappropriated fund activities (Trust funds) along with the Federal budget request to provide an overview of all uses of funds for each Smithsonian bureau. The estimates for Trust funds are subject to the uncertainty of donations, grants, and contracts; fluctuations in visitor attendance; the volatility of the economy, which directly affects restaurant, mail order, and shop revenues; Associates' memberships; and other auxiliary activities. The Institution's gross operating revenue, less the expenses of the auxiliary activities, represents the net operating revenue available for programmatic and other worthwhile purposes.

The Institution projects gross Trust fund revenues for FY 1993, excluding Government grants and contracts, of $243 million, a decrease of $6 million compared to FY 1992. Estimated net income for FY 1993 of $64.5 million (which includes $30 million for restricted purposes) decreased by $12 million over FY 1992. Restricted purpose funds project a decrease of $10 million from FY 1992 to FY 1993, while net unrestricted Trust funds declined $2 million to $34 million. The higher costs to retain memberships and lower margins on revenues are the primarily causes of the decrease in unrestricted net income.

The FY 1994 Trust budget constitutes approximately 29 percent of all net operating revenues for the Smithsonian, which include grants and contracts received from Government agencies. The Smithsonian expects Government grants and contracts will total roughly $46 million in FY 1994. Based on current projections for FY 1994, gross Trust fund revenues, excluding Government grants and contracts, will be $270 million with net income of approximately $70 million. Restricted purpose funds are estimated at $34 million, an increase of $4 million from FY 1993. Net unrestricted Trust fund resources reflect a projected addition of $2 million from FY 1993 to $36 million.

The Trust funds include unrestricted funds, restricted funds, and Government grants and contracts. The Institution applies them in the following manner:

UNRESTRICTED FUNDS:

General - The sources of general unrestricted funds are investment income; unrestricted endowment income; net proceeds from the museum shops, mail order, and food service concessions; sales of Smithsonian books, records, and other products based on designs and objects in the collections; the Smithsonian Associate's programs (including the Smithsonian and Air and Space magazines); and overhead recovery on Government grants and contracts the Smithsonian receives. Overhead recovery is the principal source of Trust support for central management and administrative service units of the Institution, such as legal counsel, accounting, personnel, procurement, and budget. General funds also support various activities, such as the Cooper-Hewitt Museum, Center for Folklife Programs and Cultural Studies, Office

of Development, Office of Telecommunications, Smithsonian Tropical Research Institute, Visitor Information and Associates' Reception Center, and a variety of Institutional and bureau-based programs. The Board of Regents approves these allotments.

Special Purpose - These funds arise from revenue-producing activities operated by various bureaus and offices and transfers of General funds. The two largest of these activities are the Theater/Planetarium operation of the National Air and Space Museum and the exhibit rental activity of the Institution's Traveling Exhibition Service. Special Purpose funds also include miscellaneous revenues from the sale of posters, exhibit brochures, and publications; tuition reimbursement from universities; the museums' share of sales in the restaurant and museum shops; and membership and admission fees.

In FY 1979, the Board of Regents approved the annual transfer of General funds to Special Purpose funds for certain programs previously financed through Federal appropriations. These include the Institution's various fellowship programs with projected FY 1994 allotments of $1.7 million. The Institution also transfers General funds to make awards under its Collections Acquisition, Scholarly Studies, and Educational Outreach programs. The FY 1994 budget provided a total of $2.337 million for these awards.

In FY 1994, $644,000 is available to purchase exceptional objects important to the collections. The Institution also designated $1.41 million for innovative scholarly research projects that by definition or because of scheduling requirements did not fit within the Federal budget process. These included multi-disciplinary research projects initiated by the Institution's research staff, sometimes in collaboration with scholars from other institutions. The Institution allocated the remaining $283,000 of the $2.337 million available for this program to conduct a wide range of educational outreach programs of benefit to the public, with special focus on diverse cultural audiences.

In FY 1985, the Board of Regents approved an annual Trust-fund allocation for the Special Exhibition Fund (SEF). The Institution supports exhibition programs with Federal funds and donations from individuals, foundations, and corporations as well as with the SEF. The Special Exhibition Fund, with $1.358 million in FY 1994, provides additional funds for temporary and permanent exhibitions proposed by Smithsonian bureaus that, regardless of scale, were outstanding in terms of their educational value to the public. The Fund gives special consideration to exhibitions that approach content in imaginative ways; that allow bureaus to explore new or expand current interpretive or exhibition techniques; that are worthy but, by their nature, unlikely to attract private funds; and that are likely to reach previously underserved audiences.

RESTRICTED FUNDS - Restricted Trust funds include gifts, grants, and endowments from individuals, foundations, organizations, and corporations that specify the use of the donation or bequest. Generally, these funds provide support for a particular exhibit or research project. The Freer endowment is the largest restricted endowment in the Institution. Under

the terms of the original gift and bequest, this fund is strictly limited to uses benefiting the Freer Gallery of Art.

GOVERNMENT GRANTS AND CONTRACTS - Various Government agencies and departments provide grants and contracts for special projects that only the Smithsonian can conduct because of its expertise in a particular area of science, history, art, or education and because of its ability to respond quickly to certain needs.

FY 1995 MANDATORY COSTS INCREASES

The Smithsonian Institution seeks funds to pay costs that are beyond its control to manage. These costs result from established practices in regulating wages, insurance premiums, utilities, rent, and the effects of inflation. For FY 1995, the Institution did not receive its request in time to include them in OMB final pay assumptions. This information will be provided to OMB under separate cover. The Institution requests $7,814,000 for the following mandatory costs:

Salary and Related Costs	
Necessary Pay:	
--Health Insurance (Increase in Premiums)	$1,446,000
--Federal Employees' Retirement System (FERS)	504,000
Other:	
--Workers' Compensation	217,000
--Unemployment Compensation	129,000
Total, Salary and Related Costs	$2,296,000
National Museum of the American Indian (NMAI) Costs	
--Annualization of FY 1994 Approved Positions	$303,000
--Annualization of Utility Costs at U.S. Customs House	194,000
Total, NMAI Costs	$497,000
Utilities, Communications, and Postage	$2,719,000
Rental Space	$368,000
Inflation	$1,934,000
Grand Total, Mandatory Costs Increases	$7,814,000

SALARY AND RELATED COSTS - The Institution is not including its request for FY 1994 pay raise annualizations or FY 1995 pay raises. This information will be provided to OMB under separate cover.

Health Insurance - For FY 1995, the Institution requests $1,446,000 to cover the rising cost of health insurance premiums for employees. The Smithsonian's FY 1994 base is $10,447,000, which includes a $953,000 increase pending before Congress for FY 1994. The requested increase includes the funds required to annualize the projected FY 1994 cost increase

($243,000 for one-quarter of the year) and to cover an estimated FY 1995 increase of 15 percent ($1,203,000 for three-quarters of the year).

Federal Employees' Retirement System (FERS) - The Smithsonian requests an increase of $504,000 to cover the increased benefit costs associated with the higher percentage of FERS participants comprising the Federal workforce. For FY 1995, the projected cost increase associated with former CSRS positions that are now occupied by staff in the FERS system amounts to $9,250,000. The Institution has in its base $8,746,000 (including a $1,533,000 increase for FY 1994 pending before Congress) to fund this shift, leaving a shortfall of $504,000. Additional funds will be required in the future, as the composition of the Institution's Federal workforce continues to shift to FERS participation (versus CSRS) over time.

Workers' Compensation - The Smithsonian requests an increase of $217,000 as specified in the provisions of Section 8147(b) of Title 5, United States Code, as amended on April 21, 1976, by Public Law 94-273. This law provides for payments to be made to employees for injuries and to their families in cases where work accidents result in employee death. These payments are determined and made by the U.S. Department of Labor's Employment Standards Administration, which subsequently bills agencies for costs incurred for their employees. Despite the Institution's emphasis on the Accident Safety Program administered by the Office of Environmental Management and Safety, which provides employee training in safety awareness and promotes the identification and elimination of potential hazards in the workplace, there has been an increase in employee compensation costs. The FY 1995 bill for the Institution's Federal portion ($1,710,000) covers the actual expenses incurred for the period July 1, 1992, through June 30, 1993. With an amount of $1,493,000 in its FY 1994 base for workers' compensation (including a $39,000 request for FY 1994 currently pending before Congress), the Institution requests an additional $217,000.

Unemployment Compensation - The Institution requests an increase of $129,000 for the projected higher unemployment compensation costs estimated for FY 1995. The Smithsonian projects a base deficiency in this account for FY 1994 of $95,000 (projected costs of $346,000 versus a base of $251,000), and projects a deficit in the current year of $171,000 (projected costs of $314,000 versus a base of $143,000). The FY 1994 base of $251,000 (of which $108,000 is included in the FY 1994 request currently pending before Congress) plus the requested increase will provide $380,000 for unemployment compensation in FY 1995.

NATIONAL MUSEUM OF THE AMERICAN INDIAN COSTS - The Smithsonian requests an amount of $497,000 to annualize new positions and utilities costs requested in FY 1994. This amount represents funding for new positions ($303,000) required to open and support the National Museum of the American Indian at the George Gustav Heye Center in New York City. In addition, $194,000 is requested to annualize FY 1994 funding for utilities at this facility.

UTILITIES, COMMUNICATIONS, AND POSTAGE - An FY 1994 Federal base of $21,343,000 (which includes $1,380,000 pending before Congress) and anticipated reimbursements of $860,000 (total of $22,203,000) are available to fund the costs of electricity, steam, gas, fuel oil, water, sewer, communications, and postage for nearly all Institution facilities. The Smithsonian requires an increase of $2,719,000 in FY 1995 to cover anticipated costs.

The Smithsonian's projections of future utilities costs consider a variety of factors. These include:

- comparative data on actual energy consumption in previous years for each facility;
- adjustments for normal weather conditions for this geographic region based on information provided by the National Weather Service;
- actual and projected rates charged by utility companies;
- actual and projected reimbursements for utility costs from concessions, museum shops, and the Friends of the National Zoo;
- modifications to work and public spaces within facilities;
- continued energy conservation efforts in all Smithsonian buildings;
- improvements installed to heating, ventilating, and air conditioning systems and components throughout the physical plant;
- the design of new facilities;
- projected increases in consumption caused by expanded use of computers and other equipment throughout the Institution.

The following table shows the costs and base funds available to cover the components of the Utilities account from FY 1993 to FY 1995.

ANALYSIS OF UTILITIES AND COMMUNICATIONS COSTS
FY 1993 - FY 1995
($000's)

	FY 1993 ESTIMATE	FY 1994 ESTIMATE	FY 1995 ESTIMATE
ELECTRICITY			
Use - Millions of KWH	121.0	122.0	122.0
Unit Cost - Average per KWH	0.077	0.081	.0844
Cost - $000's	$9,317	$9,882	$10,298
FY 1995 Estimated Cost			$10,298
FY 1994 Base*			$ 8,273*
Base Shortage, Electricity			$ 2,025
STEAM			
Use - Millions of Pounds	202.8	203.0	203.0
Unit Cost - Avg. per 1,000 lbs.	15.50	14.95	14.95
Cost - $000's	$3,143	$3,035	$3,035
FY 1995 Estimated Cost			$3,035
FY 1994 Base			$3,000
Base Shortage, Steam			$ 35
GAS			
Use - Millions of Cubic Ft.	1.387	1.541	1.541
Unit Cost - Avg. per Cubic Ft.	.6490	.6490	.6490
Cost - $000's	$ 900	$1,000	$1,000
FY 1995 Estimated Cost			$1,000
FY 1994 Base			$1,000
Base Shortage, Gas			$ 0
FUEL OIL/WATER			
Cost - $000's	$ 325	$ 400	$ 436
FY 1995 Estimated Cost			$ 436
FY 1994 Base			$ 400
Base Shortage Fuel Oil/Water			$ 36

D.C. GOVT. WATER/SEWER			
Cost - $000's	$1,542	$2,030	$2,353
FY 1995 Estimated Cost			$2,353
FY 1994 Base			$2,030
Base Shortage, D.C. Water/Sewer			$ 323
COMMUNICATIONS			
Cost - $000's	$4,700	$4,800	$5,100
FY 1995 Estimated Cost			$5,100
FY 1994 Base			$4,800
Base Shortage, Communications			$ 300
POSTAGE			
Cost - $000's	$2,364	$2,700	$2,700
FY 1995 Estimated Cost			$2,700
FY 1994 Base			$2,700
Base Shortage, Postage			$ 0
TOTALS FY 1995 Estimated Cost			$24,922
FY 1994 Base*			$22,203*
FY 1995 Shortage			$ 2,719

* Reflects FY 1994 Federal estimated base plus anticipated reimbursements in FY 1995 of $860,000.

ELECTRICITY - The major component of the Utilities account is electricity. The consumption total for FY 1993 reflects that 1993 was an unusually warm year requiring continuous operation of electrical systems to maintain the temperature and humidity conditions necessary in the facilities. The FY 1995 estimate of electrical consumption reflects general increases associated with automation efforts underway in all Smithsonian museums. The FY 1995 rate estimate reflects a seven percent rate increase effective July 1992 that was overlooked in our FY 1994 request and a 10.9 percent rate increase that was requested by PEPCO and is expected to become effective sometime during FY 1994. These expected increases in both consumption and rate plus anticipated reimbursements in FY 1995 result in base resources that are insufficient to cover the anticipated electricity costs for FY 1995. An increase of $2,025,000 is requested.

STEAM - The FY 1995 steam consumption estimate includes a modest increase which the Institution expects will be partially offset by a rate decrease from GSA. As a result, an increase of $35,000 is requested.

GAS - Although gas consumption is expected to increase during FY 1994 and 1995, the rate is expected to remain stable. The available base resources are sufficient to cover the FY 1995 costs and no increase is requested.

FUEL OIL/WATER - The FY 1994 and 1995 estimates reflect consumption increases associated with the National Zoological Park facilities at Front Royal, Virginia and the National Museum of the American Indian in New York City. As a result of these consumption increases, an additional $36,000 is necessary to cover the costs for fuel oil and water in FY 1995.

D.C. GOVERNMENT WATER/SEWER - The FY 1993, FY 1994 and FY 1995 estimates are based on cost projections provided by the D.C. government. The estimated base for FY 1995 is insufficient to cover the D.C. government water and sewer charges; therefore an increase of $323,000 is requested.

COMMUNICATIONS - The FY 1995 estimate is based upon increased usage of data communications links between Washington, D.C. and remote Smithsonian facilities. This increase is also necessary to provide data communications services for access to Institutional information systems such as the Accounting and Payroll/Personnel systems, facsimile machines, electronic mail systems and the Library system. These needs result in the requested increase of $300,000.

POSTAGE - Although the FY 1995 estimate includes a proposed rate increase by the United States Postal Service in 1994 ($100,000 request for FY 1994 currently pending before Congress), savings achieved by metering postage is expected to offset the proposed rate increase. Therefore, base resources are sufficient to cover postage expenses in FY 1995 and no increase is requested.

ENERGY CONSERVATION - The Institution continues to implement its comprehensive energy conservation program and monitor and limit all forms of energy consumption. An automated energy management system reduces peak energy demand by selectively shutting down equipment when necessary. This system, when fully installed, will monitor equipment in all buildings for fluctuations or malfunctions and alert staff to inspect for problems.

Through the use of the Facilities Management computer system, the Smithsonian will eventually gain closer control over building lighting systems. The system conserves electricity by turning lights on and off as use fluctuates. Automated lighting controls are now in place at the Air and Space Building, American History Building, Natural History Building, Quadrangle Complex, Hirshhorn Building, Smithsonian Institution Building, and American Art and Portrait Gallery Building. The Smithsonian is in the process of installing such a system in the Museum Support Center and is expected to be completed in FY 1994.

RENTAL SPACE - For FY 1995, the central rental account, included in the line-item for the Office of Plant Services, requests $368,000 for uncontrollable expenses. This account provides for the Federal portion of the rental expenses for program and administrative activities

located in L'Enfant Plaza, the Smithsonian Institution Service Center at 1111 North Capitol Street, the research bureaus of the Archives of American Art in New York City and Boston, Massachusetts, and collection storage at the Fullerton Industrial Park in Springfield, Virginia. The amounts below reflect projected costs for rental space at these sites:

FEDERAL RENTAL PROGRAM
ADMINISTERED BY THE OFFICE OF PLANT SERVICES
FY 1993 - FY 1995
($000's)

	FY 1993 Estimated Cost		FY 1994 Estimated Cost		FY 1995 Estimated Cost	
	Federal	Trust	Federal	Trust	Federal	Trust
L'Enfant Plaza	$1,975	$1,547	$2,087	$1,328	$2,315	1,396
North Capitol Street	1,501	169	1,607	184	1,651	256
Archives of American Art:						
- New York	137	--	146	--	155	--
- Boston	18	--	20	--	21	--
Fullerton	416	--	443	--	472	--
Total Costs	$4,047	$1,716	$4,303	$1,512	$4,614	$1,652
Base	4,246		4,246		4,246	
Surplus/(Deficit)	199		(57)		(368)	

The FY 1995 estimate for Federal rental costs for L'Enfant Plaza reflects annual cost increases specified in the lease agreement and takes into account the offsetting Trust fund contribution for shared administrative activities and office space occupied by the specific auxiliary activities on the Mall.

The projected rental expense for space at 1111 North Capital Street includes the cost increase associated with a negotiated extension of the current lease through September 1995 and a property tax increase. The allocation policy on administrative and programmatic space also governs the Federal/Trust apportionment of costs for this location.

The projected rental expense for the Archives of American Art represents funding requirements for the spaces occupied in New York City and Boston. The increases reflect inflationary adjustments in the rental rates.

The projected rental expense for the Fullerton reflects the continuing cost of storage space for the Smithsonian Institution Archives and the National Museum of American History.

For FY 1995, the projected Federal share of the central rental account is $4,614,000. The Institution's Federal base is $4,246,000 in FY 1994. Therefore, the Smithsonian requires an additional amount of $368,000 to defray space rental costs at these locations in FY 1995.

INFLATION - For FY 1995, the Smithsonian requests an amount of $1,934,000 to offset the inflation-related erosion of the Institution's purchasing power over the past year. This amount represents the effects of inflation on the Institution's Federal nonpersonnel budget for FY 1995, excluding utilities, rent, Major Scientific Instrumentation, and Museum Support Center equipment and move costs. The requested increase will offset the negative effects brought about by inflation for FY 1995. The amount requested was calculated using the Consumer Price Index (3.0 percent for FY 1995) provided by the Office of Management and Budget. Supplies and services affected by inflation over the past year include:

Services	Areas of Inflationary Increase
Collections Management	Storage and conservation equipment and supplies
Research	Travel, supplies, scientific instruments, books, and research journals
Facilities Management and Administration	Medical/safety supplies and equipment, equipment service and maintenance, and custodial supplies and equipment

Research Equipment/Information Resources/Latino Programming

As part of the Restructuring Plan, the Smithsonian reallocated funds to create two Institution-wide funding pools: one supports the bureaus' needs to replace, upgrade, and acquire new research equipment ($1.2 million); the other enables the myriad of information technology needs across the Institution to be addressed systematically ($1.1 million). This request is to increase each of these funds by $3.4 million; to add a third fund of $1.0 million for Latino programming; and to request that they be no-year funds.

Research Equipment

Over the last year, the bureaus conducted an extensive inventory of their research equipment and its condition. The inventory demonstrated dramatically the serious need at the Institution for research equipment renewal. Because of age and service, some equipment simply has passed its useful life span. Other equipment is obsolescent; new technologies have resulted in far more advanced and precise equipment. This new equipment is currently unavailable to Smithsonian scholars, limiting their ability to remain on the leading edge in conducting critical research.

A panel consisting of bureau and office directors was established to evaluate and prioritize requests for funding through the Research Equipment Pool ($1.2 million in FY 1993). Due to the extensive needs which exist, the requests made by the bureaus far exceeded the funds available.

This request is to increase this fund by $3.4 million and request the entire fund a "no-year" fund. By not restricting expenditures to a single year, the Smithsonian will be able to: aggregate dollars for the purchase of large, costly items; commit monies needed by vendors for custom-made research equipment which may require more than one year to design and build; retain a portion of the pool for emergency funding; and take advantage of technological advances as vendors produce them. The Institution considers the research equipment needs of the Institution of considerable importance and, therefore, is seeking this additional $3.4 million, increasing the total pool to $4.6 million. This would provide an adequate base for maintaining and expanding the systematic renewal of research equipment which was begun this year.

Information Resources

From local area networks (LANs) which enable bureaus to more easily conduct their collections management responsibilities to large data storage and processing systems on mainframe computers that support administrative operations, and from a burgeoning number of external information bulletin boards and networks to increasingly sophisticated computerized research tools, the world of technology is changing the way in which the Institution gathers and shares information. To wisely and actively participate in this changing technological

environment, the Institution is in the midst of a comprehensive information resources management planning process. Involvement in the process has been extensive and has included management and those with direct responsibilities in such areas as research, business and administration, collections management, public programs, and facilities management.

A key expected outcome of the planning process is the identification of priority information technology initiatives from a potentially lengthy array of competing options within the Institution. Without the benefit of the final recommended initiatives, the $1.1 million in the FY 1993 Information Resources Pool, created from internal reallocations during the Restructuring Process, have been distributed to three major information technology projects identified as critical by management. These projects include:

- implementation of the Personnel Action System (PERSAC), an electronic personnel system;
- continuation of the Smithsonian Financial System Connectivity Program;
- purchase and installation of hardware and communications for the operation of the new Smithsonian Financial System.

Consistent with the Smithsonian's agreement with Congress that implementation of some portions of the Restructuring Plan would require two years, the balance of $512,000 remaining in the pool after the expenditures for these three projects has been directed toward relieving those units unable to fully implement their restructuring plans in FY 1993.

In early FY 1994, the results of the information resource management planning process will inform the future distribution of funds in the pool. Given the estimated costs to the initiatives already identified as potential candidates for consideration, the Smithsonian is seeking an increase of $3.4 million for this pool in FY 1994, for a total base of $4.5 million.

Latino Exhibitions, Acquisitions, and Educational Programming

The Smithsonian's public, generally defined as the American people, is changing rapidly. The evidence of this change includes an expanding minority youth population, an increasing number of foreign-born residents, and a more aged population than this country has ever experienced. The cultural diversity of the nation is becoming one of its most notable characteristics.

Although the museums and the National Zoological Park have been very resourceful to date in addressing the Latino community with their limited exhibition, collections, and education funds, the Institution now faces an external reality that demands an active and well-constructed response. The number and quality of proposals advanced by the individual bureaus pertaining to Latino initiatives for consideration by management over the last few budget cycles demonstrates creativity and a commitment to addressing this need.

The Smithsonian Institution is seeking $1 million in FY 1995 for a fund to support the development of exhibitions, the acquisition of collections, and the undertaking of educational initiatives across the Institution that will permit the accomplishments of Latinos to be shared more widely with the public. The Smithsonian plans to disperse these funds annually to the bureaus to attract matching, and ultimately, sustaining funding from other sources. The majority of this funding ($900,000) in FY 1995 will be distributed to the following bureaus for pilot projects in exhibitions, collections, and education: the Cooper-Hewitt Museum ($100,000); the Hirshhorn Museum and Sculpture Gardens ($200,000); the National Museum of American Art ($200,000); the National Museum of American History ($300,000); and the National Zoological Park ($100,000). The remaining $100,000 will be distributed to the Institute of the Americas in support of its program planning.

Funding of pilot programs will enable informed long-range investment in exhibitions, collections, and education programs focused on the Latino community. In the short-term, these new pilot programs will permit the Institution, through creative experimentation at the museum level, to expand its coverage of the Latino culture as well as its Latino audience. External funding can also be projected to increase in the long-term; with evidence of positive outcomes from the pilot programs, the case for external funding can be made substantially stronger.

SCIENCES

Assistant Secretary for the Sciences

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	28	1,396	7	539	-	1,505	-	701	-	357
FY 1994 Estimate	28	1,424	7	584	-	1,233	-	629	-	363
FY 1995 Estimate	28	1,579	7	584	-	1,505	-	629	-	363

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Office of the Assistant Secretary for the Sciences (OAS/S) facilitates, strengthens, and plans for the Smithsonian's worldwide scientific efforts and research support activities. The Office develops and implements Institution-wide policies that foster the creation and dissemination of high-quality research in the sciences and promote science as an essential endeavor that contributes to knowledge and addresses issues of pressing concern to society. The Office also seeks to build an excellent research staff that reflects the Nation's diverse heritage and the Institution's scholarly strengths, to foster interdisciplinary research and effective linkages among scholars within and outside of the Institution, and to encourage the integration of research results and staff into the other areas of the Smithsonian, particularly exhibition, education, and public programs.

For FY 1995, OAS/S requests an increase of $155,000 to support the Minority Internship, Native American Awards, and Fellowship programs.

Included in this line-item are the Smithsonian Institution Scientific Diving Program and the Office of Fellowships and Grants. As a result of the Institution's Restructuring Plan implemented in FY 1993, the Office of Registrar, formerly included in this line-item, is now merged with the Office of Smithsonian Institution Archives.

The Smithsonian Institution Scientific Diving Program oversees the diving activities of the Smithsonian staff and related investigators, ensuring their safety and training in compliance with the Department of Labor's Occupational Safety and Health Administration (OSHA) regulations and the standards of the American Academy of Underwater Sciences. The Office of

Fellowships and Grants manages and administers the Institution's programs of research grants, fellowships, and other scholarly appointments.

PROGRAM:

I. Office of the Assistant Secretary for the Sciences - The Office of the Assistant Secretary for the Sciences, in concert with the Secretary and other management staff, supervises the scientific activities of the Institution. The Office performs a wide range of functions: advises the Secretary and Under Secretary on major policy issues as a member of the Smithsonian's senior management team; coordinates programmatic and facilities planning for Smithsonian science activities by working closely with bureaus, offices, and programs; allocates Institutional research resources through the budget process (Federal and Trust) and through internal competitive funding programs; assesses the programmatic and administrative strengths of science bureaus, offices, and programs in setting priorities and coordinating activities; evaluates scholarly staff through the hiring, review, and promotion process; provides leadership, communication, and support to the Smithsonian's scholarly community and research support offices; fosters Smithsonian ties with outside scholarly organizations and universities worldwide; promotes an appreciation of the importance of scientific research among the Smithsonian staff and outside constituencies, such as Congress, the Office of Management and Budget, major donors, and the media; and encourages the integration of Smithsonian research with other Smithsonian endeavors.

To provide leadership and support for program operations, regular communication is maintained with key staff of all bureaus, offices, and programs under the administration of the Assistant Secretary for the Sciences via meetings, phone contact, and exchange of memoranda and documents. The Office produces a bi-monthly newsletter and scholarly events calendar offering information on funding programs, proposal deadlines, research opportunities, and Smithsonian conferences, lectures, symposia, and public programs. This Office, which also oversees the Scientific Diving Program, coordinates scientific diving activities that support collection and the study of underwater subjects and environments. The Scientific Diving Program provides critical training and certification procedures for all Smithsonian divers.

II. Office of Fellowships and Grants - The Office Fellowships and Grants (OFG) manages the Institution's centralized fellowship and internship programs, all other stipend appointments, and additional significant programs that support research by Smithsonian scholars and their collaborators.

Through these programs, students and scholars from throughout the world visit the Institution and use its varied resources. OFG administers approximately 900 appointments and 55 grants. In FY 1993, OFG awarded 97 graduate student, predoctoral, and postdoctoral fellowships through the Institution-wide program. Twenty-seven of these recipients were foreign students and scholars from 18 countries. In addition, 18 minorities were appointed, thereby expanding the cultural diversity of the Smithsonian research community. Under the Short-Term Visitor Program, 155 persons representing 34 countries came to the Institution. The

Smithsonian Institution-University Programs in the Structure and Evolution of Terrestrial Ecosystems, funded by a grant from the Andrew W. Mellon Foundation, placed nine researchers and students at the National Museum of Natural History and the Smithsonian Tropical Research Institute. In addition, Federal and Trust funds allocated to the bureaus supported 242 short- and long-term awards. The Office also administered internship stipend awards for 220 students in FY 1993.

OFG administers programs to increase minority participation in Smithsonian research disciplines and educational activities. Thirty-nine students joined ongoing research and museum studies in the Minority Internship Program. The Native American Awards Program selected 21 Native American students and scholars to collaborate with the staff and work on Native American resources and activities at the Institution.

Two grant programs provide scholarly support to Smithsonian professional staff. Twenty-eight proposals were funded in FY 1993 under the Scholarly Studies Program. The Research Resources Program supports archival projects, and seven awards were made under this program.

EXPLANATION OF PROGRAM INCREASE:

Expanded Support for Intern/Fellowship Program ($155,000) - Requested funds will support the Minority Internship, Native American Awards, and Fellowship programs.

NONAPPROPRIATED SOURCES OF FUNDING:

I. Office of the Assistant Secretary for the Sciences:

Unrestricted General and Special Purpose Funds - Annual allotments provide funds that support the salary, benefits, and expenses of the Assistant Secretary for the Sciences, a research assistant, and a special assistant. The Smithsonian also provides support for the exchange of scholars and scientific information between the Smithsonian and scientific organizations in other nations. Special purpose funds support cooperative agreements between the Smithsonian and the Nation's universities. The Research Opportunities Fund supports unanticipated general research for Smithsonian scholars.

Restricted Funds - These consist of restricted endowments, gifts and grants from individuals, foundations and corporations which specify the use of the donation or bequest. Competitive awards are made to Smithsonian units from various endowment funds. These awards are reflected in the expenditures of the recipient organizations.

Government Grants and Contracts - Contract funds have been provided by the Office of Naval Research for the continuation of studies in the area of manpower research and development.

II. Office of Fellowships and Grants:

Unrestricted General and Special Purpose Funds - These funds are primarily for the Institution-wide fellowship programs. Scholars and students on short visits also receive support. A program allotment provides funding for a portion of OFG's administrative expenses.

In addition, special purpose funds support internships and faculty fellowships for students and scholars of underrepresented groups who are pursuing undergraduate and graduate degrees or wish to further their research specialties. The Minority Internship, Faculty Fellowship, and Native American Awards programs support these appointments.

Smithsonian Astrophysical Observatory

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	129	13,708	65	6,684	52	5,260	-	-	167	31,600
FY 1994 Estimate	129	14,263	65	7,129	52	5,260	-	-	172	31,400
FY 1995 Estimate	137	14,762	65	7,129	52	5,260	-	-	172	31,400

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Smithsonian Astrophysical Observatory (SAO) conducts research to increase understanding of the origin and nature of the universe and to communicate this information through publications, teaching, and public presentations. SAO studies diverse systems, including the large-scale structure of the universe, clusters of galaxies, galaxies, quasars, the Sun, and planets. SAO also conducts research in laboratory astrophysics, atmospheric physics, and geophysics. SAO research has a major impact in the worldwide scientific community and has helped the United States maintain worldwide leadership in astrophysical research.

For FY 1995, SAO requests an increase of 2 workyears and $180,000 for two senior high-energy astrophysicists.

In addition, the FY 1995 request for SAO includes an increase of 6 workyears and $319,000 for salaries and related costs for the submillimeter array. Since this increase is related to the Major Scientific Instrumentation request, the justification for these positions appears in the Major Scientific Instrumentation section of the budget. The Institution also requests an increase in funding in the Major Scientific Instrumentation line-item for the nonpersonnel support to continue the construction of the submillimeter wavelength telescope array and the conversion and instrumentation of the Multiple Mirror Telescope (MMT).

PROGRAM - The Smithsonian Astrophysical Observatory is a member of the Center for Astrophysics (CfA) headquartered at Cambridge, Massachusetts, where, in collaboration with the Harvard College Observatory, it pursues a broad program of research organized by the following disciplines: atomic and molecular physics, high-energy astrophysics, optical and

infrared astronomy, planetary sciences, radio and geoastronomy, solar and stellar physics, and theoretical astrophysics.

SAO's observing facilities include the Fred Lawrence Whipple Observatory in Arizona, the Oak Ridge Observatory in Massachusetts, and a millimeter-wave radio telescope at Cambridge, as well as instruments launched from time to time aboard balloons, rockets, and spacecraft.

Research - In FY 1993, SAO made significant advances in several program areas, as highlighted below.

An ultraviolet coronagraph designed at SAO for studies of the Sun's hot outer atmosphere, or extended corona, was one of two instruments constituting the free-flying Spartan experiment package deployed and retrieved by astronauts aboard the National Aeronautics and Space Administration's (NASA) Discovery space shuttle in April. Preliminary analysis of the ultraviolet observations of structures and features extending far above the Sun's surface suggest scientists may be able to determine--and ultimately predict--how hot, electrically charged gas is accelerated out of the Sun at more than a million kilometers per hour to form the solar wind. As it streams outward in space, the wind interacts with the atmospheres of bodies in the solar system, causing auroral displays on Earth and creating the glowing tails of comets, as well as producing magnetic storms near Earth that sometimes disrupt communications systems and trigger power outages. The Spartan experiment was part of a coordinated international observing campaign from both space and the ground that should produce the best and most complete data set ever gathered on the acceleration of the solar wind.

The rocket flight of an SAO-IBM (International Business Machines Corporation) x-ray telescope in April made extremely high-resolution images of structures in the corona near the Sun's surface as part of the international campaign linked to the Spartan experiment. The continued success of SAO's rocket program led to a $5 million contract from the U.S. Air Force to design a similar telescope payload for a multi-purpose satellite called SWATH, or Space Weather and Terrestrial Hazards. The SAO instrument will make long-term observations of space debris in low Earth orbit and high-resolution images of the Sun's corona--including violent, transient phenomena such as mass ejections and flares that can produce geomagnetic disturbances and disrupt communications and radar systems.

Two small, expendable, tethered-satellite systems conceived and designed by SAO scientists were successfully flown in space in the spring of 1993. The first, launched March 19, 1993, tested the performance and dynamics of the "satellite-on-a-string concept." A satellite attached by a 20-kilometer-long flexible cable to a second-stage rocket was slowly unreeled until it began swinging like a pendulum. Once the payload stopped swinging and came to a nearly vertical position, it was cut loose and allowed to reenter the Earth's atmosphere. The motion and dynamics of the tether confirmed SAO's computer models of predicted behavior. The second experiment, an electrodynamic tether called the Plasma Motor Generator, was launched on June 26, 1993, and demonstrated the ability of a tether to generate

an electrical current in space. This experiment was originally suggested by SAO scientists two decades ago and finally was performed, successfully on the first attempt.

Culminating a long series of advances in the improvement of atomic clocks, SAO scientists achieved the first operation of a hydrogen-maser clock that was cooled to temperatures near absolute zero (-273 degrees Celsius). The cold hydrogen-maser clock operates with a precision equivalent to losing or gaining no more than 0.0001 seconds in a million years. Achieving this extraordinary precision allows many tests of fundamental importance to physics.

Among the most puzzling features of the universe are the large-scale structures revealed in the SAO maps of the nearby universe that now include more than 14,000 galaxies. Analyses by SAO scientists indicate that the data rule out some widely held theories for the formation of large-scale structure in the universe because the maps reveal larger, more coherent structures than the theories predict. Scientists are striving to conceive alternative theories to explain these large-scale structures. Types of matter yet to be observed in the laboratory or entirely new physical processes may in fact determine the form and fate of the universe.

The discovery by SAO scientists of larger amounts of heavy elements in distant quasars may imply that conditions in the neighborhoods of such young quasars are very different from the conditions around nearby, relatively old, quasars. A related discovery that x-ray spectra for clusters of galaxies show a large range of abundances for heavy elements indicates that clusters do not all evolve in the same way. To interpret these results, scientists need to understand better how nuclear fuel is burned within stars; how heavy elements are released in supernova explosions; how hot gas is trapped within individual galaxies; and how material formed in supernovas mix with primordial gas between galaxies. With improved understanding of these processes will come a much clearer picture of how the universe came to be the way we see it today.

Development of SAO's Submillimeter Telescope Array (SMA), a unique astronomical instrument to observe the largely unexplored submillimeter region of the electromagnetic spectrum, marked some major milestones in 1993. Construction began on a test and assembly facility for the SMA's six, 6.5-meter-diameter, movable radio antennas at Westford, Massachusetts. The giant, self-propelled, wheeled transporter that will position the antennas in different array configurations neared completion. Negotiations with the University of Hawaii led to a tentative agreement on the terms for the lease of a site for the SMA within the astronomical research complex near the 14,000-foot summit of Mauna Kea. When completed in 1997, the SMA will be capable of producing images comparable to the best optical telescopes and some ten times better than any existing submillimeter instrument. By observing in the band of radiation between radio and infrared wavelengths, the SMA will be able to probe both the murky dust clouds surrounding newborn stars and the violent cores of exploding galaxies. The SMA also will permit study of cool, faint objects in our own solar system, such as comets and the outer planets.

The University of Arizona's Mirror Laboratory in Tucson completed cleaning the core material from the honeycomb interior of the 6.5-meter replacement mirror for the Multiple Mirror Telescope. Now free of all core material, the blank is ready for the nearly two-year process of grinding and polishing.

The two elements forming the initial stage of Project IOTA (Infrared Optical Telescope Array), an optical and infrared interferometer intended for making high-resolution images of astronomical objects, were installed at SAO's Whipple Observatory on Mt. Hopkins, Arizona, in the spring of 1993. In this system, two small (45-centimeter diameter) telescopes will each gather light from the same astronomical object and combine it into one image, thus achieving an angular resolution comparable to a single telescope with a mirror 40 meters in diameter. This means IOTA would be capable of resolving an object the size of a city bus on the surface of the Moon. IOTA will be particularly well suited to measuring the diameters of bright stars and observing spots on their surfaces and, at infrared wavelengths, to searching for precursors of planetary systems, such as disks of dust and gas around Sun-like stars.

An SAO scientist was elected to the National Academy of Sciences (NAS), bringing to eight the number of NAS members on the SAO staff. Another SAO scientist received the highest award bestowed by the American Geophysical Union, a professional organization whose members comprise more than 50,000 geologists, geophysicists, oceanographers, and planetary scientists.

Education - During the past year, SAO continued to develop its programs in precollege science education. The misconception video project, designed to expose prevalent, basic misconceptions that students hold about science, completed its monitoring of classroom activities in biology and physics. Further, two science education films were completed for public distribution: "So Many Galaxies, So Little Time" and "Annie and the Stars of Many Colors." Finally, SAO created a number of innovative modules for elementary school children to teach the basic notions of time, and held four workshops, each of two or three weeks' duration, for well over a hundred teachers from across the country, to help them improve their teaching of fundamental astronomical and earth-science concepts.

EXPLANATION OF PROGRAM INCREASE:

Senior High Energy Astrophysicists (2 workyears and $180,000) - Two senior high-energy astrophysicists ($174,000), with funding for rent ($6,000), will carry out research on the puzzling processes that produce prodigious amounts of energy radiated from some galaxies as X-rays. They will develop the sophisticated software data systems vital for utilizing the Advanced x-ray Astrophysics Facility (AXAF), a major NASA spacecraft, whose science center SAO will operate.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Unrestricted general funds come primarily from overhead charged on contracts and grants. These funds are used to support administrative positions and other administrative costs of SAO. Special purpose funds come primarily from the Institution's Trust funds. Trust funds provide direct support for some research as well as for the Fellowship and Visiting Scientist programs, the largest users of special purpose funds.

Restricted Funds - Restricted funds consist of specific endowments as well as gifts from individuals, foundations, or corporations earmarked for particular research purposes.

Government Grants and Contracts - SAO receives the majority of its funds through government agency contracts and grants for research in its particular areas of expertise and experience. This research is often carried out in cooperation with both governmental and academic institutions in the United States and abroad.

Smithsonian Tropical Research Institute

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	161	7,499	4	295	2	382	-	373	-	470
FY 1994 Estimate	161	7,631	5	305	2	382	-	242	-	350
FY 1995 Estimate	161	7,831	5	305	2	360	-	242	-	350

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Smithsonian Tropical Research Institute (STRI) is the Nation's premier center for fundamental research on tropical ecosystems. It maintains the only extensive U.S. research facilities in the mainland New World tropics. Studies at STRI of tropical forest and coastal marine communities provide basic data upon which to base decisions on the wise use and possible fate of these unique and threatened natural systems. STRI is the permanent base of a core of tropical researchers, who in turn provide an intellectual environment that attracts many visiting scientists and research fellows. STRI researchers study the evolution, behavior, ecology, and history of tropical species in systems ranging from coral reefs to tropical rain forests. Growing strengths in molecular biology, plant physiology, and paleoecology complement established excellence in evolutionary biology and ecology. For more than four decades, STRI has carried out intensive research on Barro Colorado Island (BCI), part of the Barro Colorado Nature Monument (BCNM), which is under STRI custodianship as designated in the Panama Canal Treaties of 1977. Results of BCI studies are now a critical resource of long-term studies for understanding tropical forests, and the station is a center for continuing studies without peer. The ability of STRI researchers to compare and contrast the splendidly different marine systems of the Atlantic and Pacific coasts makes their research of unique significance. Possessing perhaps the best tropical research library in the southern part of the Americas, and with a state-of-the-art conference center and experienced administrative staff in Panama City, STRI expects to continue to be a major center of basic research on tropical ecosystems and catalyst of public awareness of tropical science.

As a result of the Institution's Restructuring Plan implemented in FY 1993, the Smithsonian Institution/Man and the Biosphere Biological Diversity Program is now included under STRI.

For FY 1995, STRI requests an increase of $200,000 for human ecology ($122,000) and molecular biology ($78,000). No new positions are being requested as they will be reallocated from current Smithsonian workyear resources.

PROGRAM - The Smithsonian Tropical Research Institute performs four major functions in fulfilling its mission in tropical biology:

- conducts fundamental research in the tropics on the ecology, physiology, evolution, and behavior of plants and animals, including humans, with emphasis on the relationships of tropical organisms to global climatic change;

- provides facilities and logistical support for an international scientific community to study both terrestrial and marine tropical biology;

- supports environmental education, conservation, and management of tropical ecosystems;

- protects and manages the Barro Colorado Nature Monument under a treaty-assigned responsibility.

The majority of species of plants and animals live in the tropics, yet tropical ecosystems are not well studied or understood. Tropical species also are disappearing rapidly, and their loss will affect regional and global climatic patterns. Tropical deforestation and uncontrolled harvesting of marine resources cause extinction of species that are sources of medically and commercially important natural products. The study of tropical environments is vital to understanding the world's biological diversity and its change through time. STRI, the only wholly tropical research institute belonging to the United States, is widely recognized as the world's leader in this field. Its extensive marine and terrestrial research programs provide the knowledge and understanding essential for the effective management and conservation of these resources. Among STRI's primary assets are the trust placed in the Institute by the host country and a long history of collaboration with Panamanian scientists and students. The continuing cooperation of the Republic of Panama facilitated the work at STRI of resident scientific staff and more than 360 visiting researchers representing 32 nations during FY 1993. Of these, 214 researchers came from 36 states of the United States, representing 52 institutions.

Smithsonian Institution/Man and the Biosphere Biological Diversity Program - In FY 1993, using studies and surveys conducted in several protected areas of the United States and Latin America, the Smithsonian Institution/Man and the Biosphere Biological Diversity Program (SI/MAB) developed an initial methodology for conducting detailed biological diversity inventories of species-rich areas around the world. Though useful institutional linkages have resulted from this program, its most important objective is the training of biologists, conservationists, nature reserve managers, and related professionals from developing countries. This training provided these researchers with skills necessary to conduct their own research in

biodiversity conservation. In a number of cases, these trained researchers have later undertaken fieldwork in association with Smithsonian counterpart scholars.

The Program has organized training workshops for almost 200 participants in more than a dozen countries of Latin America and the Caribbean, as well as in the United States. The United States Agency for International Development (USAID), UNESCO's Man and the Biosphere Program, the World Heritage Fund, the World Wildlife Fund, and Conservation International have assisted in funding training activities over the last four years.

Molecular Evolution - Molecular biological techniques are now a required tool for the systematic work that underpins tropical research on biodiversity, biogeography, and evolutionary relationships. Major contributions by STRI researchers have been made using molecular genetics to track the effects of marine species separation by the formation of the Isthmus of Panama and to reveal the existence of three separate species in what was previously thought to be a single coral. This result has had profound repercussions in coral reef ecology of the Caribbean, where this coral has been widely used for environmental interpretations.

Canopy Access System - The tropical forest canopy is the most diverse and environmentally sensitive habitat on earth, yet it is poorly known because access has hitherto been extremely difficult. STRI has pioneered the use of modified construction tower cranes to provide safe, rapid access for both researchers and equipment to large areas of forest canopy. STRI has now purchased a large tower crane with a 55-meter arm that allows an exceptionally wide area of canopy to be systematically surveyed. Ongoing research is showing for the first time how canopy trees respond to seasonal and shorter-term changes in light, humidity, temperature, and atmospheric carbon dioxide. These studies are revolutionizing the understanding of tropical forest biology and will provide the basis for management and conservation of tropical forests in the face of accelerating deforestation and rapidly changing climate.

Plant Physiology - STRI has become the world center for tropical plant physiology. State-of-the-art physiology laboratories have been established on Barro Colorado Island and at the Tupper Center. STRI scientists study how tropical forest plants respond and adapt to variations in rainfall, light, temperature, ultraviolet (UV) radiation, and other variables as well as the biochemical and genetic bases for these responses. The Plant Physiology and Molecular Evolution Programs are converging to provide a comprehensive picture of plant adaption to variable tropical environments.

Paleoecology - No complete understanding of the modern American tropics is possible without factoring in changes of climate and vegetation resulting from natural and human influences and the profound biologic and oceanographic consequences of the closing of the Panamanian Isthmus, which occurred about three million years ago. Researchers have found that tropical forests have changed profoundly over the last 200,000 years, first in response to climatic oscillations associated with the Ice Age and then from ancient modification and clearing by Amerindians during the last 11,000 years.

Surprisingly, extant forest over much of the Pacific watershed may be very young, having recovered from prehistoric clearing only after European arrival and the decline of indigenous peoples. STRI paleontological research has revealed rich fossil faunas from the last six to eight million years that have revolutionized previously held views on mass extinctions in the sea related to the closure of the Isthmus and the onset of the Ice Age.

Behavioral Ecology - The study of the behavior of individual species forms an essential link in understanding the origins of biological diversity. Exciting new ideas are being developed at STRI about how novelties arise and how animals select mates, reproduce, and take care of their young. These studies involve birds, crabs, frogs, insects, spiders, and squid. They employ modern techniques for recording, analyzing, and synthesizing animal signals and draw on molecular techniques to determine genetic relationships among the individuals and species being studied. Their results increase understanding of one of the major components in the evolution and maintenance of biodiversity in the tropics: how animals behave in their interactions with each other and with their environment.

Tropical Marine Ecology - Tropical marine communities are changing in the short term as a consequence of soil runoff from deforestation, increases in human exploitation, and the discharge of agricultural and industrial waste and, in the long term, as a result of major physical changes that are both natural and anthropogenic. STRI researchers are documenting a catastrophic regional decline in coral reef cover and reef structure. The reasons for the decline are as yet unknown. A major program of marine environmental monitoring will combine efforts of four marine researchers to track the dynamics of coastal reefs along the Caribbean coast of Panama. The construction of a new research vessel (funded through the Institution's Construction account) will allow expansion of marine studies to the entire Caribbean and tropical eastern Pacific Ocean.

Fellowships, Conservation, and Environmental Education - One of STRI's major efforts centers on the development and support of young scientists. During FY 1993, 67 young men and women from 12 nations participated in STRI academic programs, including students and professionals who took part in courses organized by STRI on conservation and natural resource management and field biology. In addition, STRI continues its programs to educate the lay public about tropical environments and cultures. In 1992, STRI replied to more than 1,741 letters requesting information on tropical forests from teachers and students from practically every state in the United States.

EXPLANATION OF PROGRAM INCREASE:

Human Ecology ($122,000) - This request will fund a human ecologist, research assistant, and related support costs to study the relationship among basic research on forest dynamics and human settlements, land use, and conservation practices. No new positions are being requested as they will be reallocated from current Smithsonian workyear resources.

Molecular Biology ($78,000) - This request will fund a data manager in the specialized area of DNA sequencing, a laboratory technician, and operating expenses, primarily to establish a DNA-user laboratory to service a wide range of scientists using molecular methodologies. No new positions are being requested as they will be reallocated from current Smithsonian workyear resources.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds derive from a variety of sources, including receipts and collections from users of Barro Colorado Nature Monument facilities (20 U.S.C. 79b (d)) and annual allotments. Such funds support, in part, the salaries and related costs of the fellowship program, insurance, and supplies. Funds also support a short-term fellowship program in tropical biology; visiting scientists and students; field research; seminars and lectures; and environmental, conservation, and educational activities in Panama. Funds to support research at STRI also are available from the Institution's Scholarly Studies Program and Research Opportunities Fund.

Restricted Funds - These funds are in the form of restricted endowments that specify the use of the donation or bequest and gifts and grants from individuals, foundations, organizations, or corporations for specific purposes. These funds support scientific research related to the biological, ecological, and behavioral processes that serve as a basis of tropical ecosystems; research related to geophysical events; publication and distribution of research results; and studies related to endangered tropical environments. In addition, such funds support the Man and the Biosphere training programs.

In FY 1991, STRI received $1.1 million from the MacArthur Foundation to support the Center for Tropical Forest Science over a five-year period. In FY 1992 and FY 1993, STRI received a gift of $2 million from the estate of Earl S. Tupper to create an endowment fund for research and $500,000 for remodeling two buildings to make space for the paleoecology and molecular evolution programs. During FY 1991 through FY 1993, $332,000 was provided through the United Nations Environment Program by the governments of Finland, Germany, and Norway; and by members of the National Board of the Smithsonian Institution to lease and then purchase a crane for forest canopy studies.

Government Grants and Contracts - In FY 1992, STRI completed a five-year contract of more than $4 million awarded by the Minerals Management Service of the Department of the Interior to study the effects of the 1986 catastrophic oil spill at the Galeta field station. The study continued during 1993 with a $400,000 contract with the Marine Spill Response Corporation.

Smithsonian Environmental Research Center

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	48	2,422	2	88	-	63	-	20	-	200
FY 1994 Estimate	48	2,480	2	92	-	63	-	20	-	200
FY 1995 Estimate	48	2,480	2	92	-	63	-	20	-	200

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Smithsonian Environmental Research Center (SERC) in Edgewater, Maryland, performs basic scientific research on coastal air-land-water systems. SERC currently occupies 42,000 square feet of laboratory, office, educational, and support space and 2,600 acres of land on the Rhode River, a tidal river system. Interdisciplinary staff, visiting scientists, and students study how land use, air quality, and weather variations affect the movement of nutrients, eroded soil, and other materials through the system, the dynamics of plant and animal populations, and the overall health of the system. SERC also conducts public education and outreach activities for audiences of varied ages and diverse cultures. The research staff uses long-term observations, controlled experiments, and models to address a wide variety of ecological questions, particularly those relevant to the Chesapeake Bay region. SERC is part of a global network of United States and international sites, each of which is conducting ecological research relevant to its geographical region.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the Smithsonian Environmental Research Center.

PROGRAM:

Research - The research program of the Smithsonian Environmental Research Center aims to understand how coastal air-land-water environmental systems function. The research staff addresses a wide variety of ecological questions while conducting long-term interdisciplinary studies of a tidal subestuary of the Chesapeake Bay (Rhode River) and its watershed. This watershed contains a mosaic of upland and floodplain forests, marshlands, croplands, pastures, abandoned fields, and residential areas typical of the mid-Atlantic coastal

plain. Comparative studies are conducted throughout the Chesapeake Bay region to put results from the Rhode River site in a regional perspective. SERC has studied the effects of herbicides on plants in the Chesapeake Bay, the effects of acid rain on deciduous forests and Bay fish reproduction, the role of riparian forests in alleviating agricultural pollution, the effects of increasing concentrations of atmospheric carbon dioxide on natural communities, and the impact of forest fragmentation on woodland bird populations.

A major focus of SERC research is the effect of land use on the ecology of Chesapeake Bay drainage basins. A recent study compared the soil phosphorus and watershed phosphorus exports from two basins upon which contrasting land use had been practiced for at least 150 years. One basin was vegetated with old-growth deciduous hardwood forest that had never been clear cut. The other basin had been in continuous agricultural use, primarily row crops. The surface soils of the forest contained about two-thirds as much total phosphorus as the cropland soils. Nearly 70 percent of the phosphorus in the forest soils was bound in organic forms, and the rest was bound to iron. Fertilization had increased the amount of phosphorus in the cropland soils, and cultivation had caused some of the organic matter to be removed by oxidation, resulting in less organic phosphorus and much more inorganic phosphate bound to iron. As a result, the cropland had about eight times higher phosphorus exports when compared to the forest. Discharges of dissolved phosphorus from cropland were double those from forest, but most of this export was as particulates in overland storm flows. The differences in soil phosphorus content were reflected in a higher phosphorus content per weight of particulates and a higher proportion of inorganic particulate phosphorus in cropland discharges. Since phosphorus is a key nutrient involved in overenrichment problems in the Chesapeake Bay, these findings are important to improved management of diffuse nutrient sources.

When lands that have been in agricultural use are allowed to revert to natural vegetation, a process called succession commences. An important aspect of plant succession is the aboveground and belowground competition of vines with trees. A recent SERC study focused on the relative effects of this competition, providing another step toward an adequate understanding of the dynamics of forest succession in the coastal plain.

SERC has for more than a decade been conducting research on the effects of streamside or riparian forests on buffering the pollution effects of agricultural runoff. Recently, these studies were extended to a floodplain forest receiving cropland drainage on the eastern shore of the Chesapeake Bay. As shallow groundwater flowed from the cropland through this riparian forest, nitrate nitrogen concentrations declined dramatically halfway through the forest. Dissolved fractions of nitrogen increased less than 0.1 part per million. Patterns of belowground oxidation-reduction potential and chemistry indicated that the major mechanism was denitrification and that the nitrate was converted to nitrogen gases released to the atmosphere. Continuing research at the SERC long-term research site on the Rhode River drainage basin made use of a computer-controlled tuneable infrared laser system and large flow-through soil exchange chambers to quantitatively investigate and model the process of belowground denitrification. With this equipment, SERC scientists can efficiently map trace nitrogen gas emissions over the whole drainage basin at frequent intervals.

Educational Activities - At SERC, groups of students and the general public can observe a variety of natural habitats firsthand. SERC's broad range of educational activities includes teacher-led field trips, self-guided nature trials, and guided tours. About 4,000 visitors participated in SERC's public programs last year. The Java History Trail, a self-guided exploration of the natural and human history of the Chesapeake, opened in July 1992.

Students from all over the world come to SERC to work with its scientists and educational staff, both in the field and in the laboratory. Predoctoral, postdoctoral, and sabbatical programs for professionals make it possible for visiting scientists to carry out collaborative or independent research. SERC also disseminates the results of its research through scientific journals, national and international meetings and seminars, and the training of scientists, as well as through its public education activities.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds, provided by allotments and grants from the Institution's internal award programs, support special events, work-learn and fellowship programs, and the salary costs of a docent coordinator and a public program director.

Government Grants and Contracts - Various Federal and State agencies supply funds for special projects conducted at SERC that use the expertise of the staff and the unique physical characteristics of the site. Four grants from the Chesapeake Research Consortium support research on ecosystem dynamics and community ecology; a grant from the U.S. Department of Energy advances the study of effects of greenhouse gases on tidal marshes; a grant from the National Oceanic and Atmospheric Administration supports work on the relationship between sunlight attenuation in the Chesapeake Bay and plant community dynamics; and a grant from the Maryland Department of the Environment supports studies of the role of riparian vegetation in nutrient dynamics.

National Zoological Park

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	370	17,861	1	170	-	466	-	832	-	594
FY 1994 Estimate	370	18,266	1	178	4	514	-	832	-	625
FY 1995 Estimate	375	18,445	1	178	4	514	-	832	-	625

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - When the National Zoological Park (NZP) was founded in 1889, its mission was defined as "the advancement of science and the instruction and recreation of the people." The Zoo still works to achieve these ends. NZP has certain features in common with other Smithsonian public facilities and some features that are unique. Its exhibits are alive, and new exhibits require new construction, not merely remodeling. Since NZP's public function is educational and recreational, it seeks to enhance public awareness about biology and related subjects. This emphasis means that the Zoo is concerned with all aspects of life, both terrestrial and aquatic, small and large, past and present. Humankind has been part of the living world, and an increasing influence on it, ever since our species first appeared. Human biological history is, therefore, part of the Zoo's subject matter. Responding to the world environmental crisis, the Zoo is now committed to representing the whole of life on earth, plant and animal, in all its complexity and glory. To this end, NZP will transform the animals-only zoological park into a biological park. In the BioPark, the intermeshing relationships of animals and plants will be highlighted. The BioPark will educate visitors by its spectacle and beauty and foster a concern for the future of life in all its forms. This holistic approach will combine living exhibits of plants and animals with museum-type exhibits of structures, such as skeletons and fossils. It will make fruitful cross-correlations with exhibits by other Smithsonian entities presenting research in art and science.

For FY 1995, the National Zoological Park requests an increase of 5 workyears and $179,000 for the support of infrastructure and collections management.

PROGRAM - By historic mandate, the primary mission of the National Zoological Park is the advancement of science, conservation of biodiversity, education, and recreation. NZP

serves both the general public and more specialized audiences by promoting the conservation of life on Earth through informal and formal education, research, and animal health programs. NZP's educational efforts center on biological literacy, with special emphases on evolution, complex adaptive interactions, the origins and importance of biodiversity, global change, and the impact of humans on the rest of the world. The Zoo has moved beyond being a zoological park concerned only with animals to becoming a biological park with a scope extending to the whole living world, emphasizing interactions and holism. By cross-referencing other parts of the Institution, NZP focuses on biology in the fields of behavior, physiology, ecology, molecular genetics, conservation (applied and theoretical), veterinary medicine, and wildlife biology. Interdisciplinary cooperation is encouraged in all these areas of research.

In pursuit of its mission, NZP exhibits a wide a range of living plants and animals on its 163-acre facility in Rock Creek Park in Washington, D.C., and maintains the Conservation and Research Center on 3,150 acres near Front Royal, Virginia, as a major animal propagation, conservation, training, and research center. The scale and scope of the Zoo's programs require a skilled support staff and specialized equipment and materials capable of developing and maintaining the unique systems essential to supporting living animal and plant exhibits.

Living Exhibits - The BioPark breaks down traditional divisions in biological exhibition between plants and animals, aquatic and terrestrial life, vertebrates and invertebrates, past, present, and future, and even science and art. At the Zoo, exhibit remodeling, renovations, and construction support a new emphasis on education about the living world. NZP goes beyond habitat exhibits that recreate natural environments to make the wonders of biology, such as intricate and beautiful adaptations for survival, accessible to all visitors. In FY 1993, the Zoo opened the first part of Amazonia, the largest indoor exhibit to be constructed at the Zoo in 54 years. It recreates a tropical river ecosystem with authentic Amazonian trees and plants, as well as a variety of fish, amphibians, reptiles, birds, and mammals. Phase II of Amazonia will occupy an 8,000 square foot gallery adjacent to the forest. When the exhibits are installed, they will highlight global changes in the environment and the role of humans in conserving biodiversity.

At its Rock Creek site, the Zoo cares for more than 6,200 animals, comprising about 500 species, and approximately 1,400 plant species. At the Conservation and Research Center, the Zoo maintains more than 800 animals representing 52 species whose status in the wild is precarious. In FY 1992, more than 800 births and hatchings occurred at the Zoo. NZP attained a similar success rate in FY 1993, including the births and hatchings of red pandas, sloth bears, red wolves, Sumatran tigers, naked mole rats, a pygmy hippopotamus, a white-cheeked gibbon, greater spear-nosed bats, Komodo monitors ("dragons"), Madagascar tree snakes, sun bitterns, green-winged macaws, boat-billed herons, golden orb-weaving spiders, earth-eating fish, armored catfish, and poritoid (coral).

Public Education and Information - The past few years have seen important new initiatives in NZP education. One, called New Opportunities in Animal Health Sciences (NOAHS), brings scientists and students together. In early 1993, NOAHS and Fairfax County

Schools, in conjunction with the National Science Foundation, held the Zoo's first national teleconference, going to more than 10,000 schools and three million students. A second such program is scheduled for November 1993, with more to follow in 1994. New exhibits and programs in 1993 include the opening of the Cheetah Theater; an exhibit on Nobel Laureate Niko Tinbergen; "Our Forest, Our Heritage," an exhibit produced in South America in cooperation with the Smithsonian's International Center; a new migratory bird garden produced in cooperation with the Migratory Bird Center; and a new educational audio tour for the Zoo.

Against this background the biological program staff presented more than 2,000 animal demonstrations, involving nearly a dozen species, to more than a quarter million visitors. Zoo laboratories, "Dr. Brasil's Field Station," and the newly opened Reptile Discovery Center held programs and activities that involved 200,000 participants. International Seal Day, Earth Day, and the first International Migratory Bird Day brought out dozens of NZP scientists and other conservation organizations to inform tens of thousands of zoo visitors. The Easter Monday African American Family Celebration planned by a large group of NZP staff presented information on employment opportunities as well as performances and demonstrations by local artists, dancers, and musicians. Finally, more than 30,000 students received on-site programming in 1993.

Outside the Zoo, as part of a comprehensive outreach program, NOAHS expanded its Scientists in the Classroom Program to include additional scientists and to bring more interns into summer programs. Through NOAHS, Friends of the Zoo education programs, and biological programs, more than 15,000 students in the Washington metropolitan area benefited from Zoo programs.

Finally, in mid-1993, an Education Council made up of a wide mix of NZP personnel, was formed to begin to coordinate and evaluate the diverse array of NZP educational activities. In 1994, this Council will play an important role in promoting general scientific literacy and engaging youth from all cultures in the possibility of scientific careers.

Research - The Nutrition Laboratory finished a two-year study of feeding and nutrition of the endangered desert tortoise in Nevada. Other Zoo scientists have learned that females of some bird species choose to mate with males that have been exposed to and survived parasite infections, and they are now studying how the male's plumage may be a badge of his fitness and resistance to parasites. The Mobile Reproductive Physiology Team expanded its research to countries in the former Soviet Union, Central and South America and Indonesia to study the reproductive, genetic, and health status of more than 150 cats of 20 rare species. The Zoo's genome resource bank expanded to include fish embryo cryopreservation to develop methods for collecting, storing, and using germ plasm from endangered fish species. Zoo pathologists are conducting studies to determine the effectiveness of certain reptilian viruses as a natural control for the brown tree snake in Guam. An inadvertently introduced species, this snake has decimated the Guam rail and remains a threat to other avian species that once flourished on Guam and surrounding North Pacific islands.

Animal Management - Clinical and pathological studies on tuberculosis in free-ranging buffalo in Africa have resulted in a reliable antemortem test for disease in this species. Studies on avian tuberculosis in marsupials (tree kangaroos) are expanding, with the finding that the infectious agent can be cultured from tracheal washes of animals demonstrating no clinical symptoms. To control this problem, various treatment regimes are being tested, and basic research on the marsupial immune system is under way in preparation for vaccination trials. Research is continuing on improving anesthetic and monitoring techniques in wildlife species in captivity and the wild. An interdepartmental research project is working to determine the cause and treatment of a metabolic bone disease resulting in a high incidence of bone fractures in hatchling Komodo monitors ("dragons"). Contributing factors appear related to nutrition and exposure to ultraviolet light. This study is timely, as more hatchings of this endangered species are expected soon.

Animal Conservation - Current research projects at the Conservation and Research Center include reproductive studies on black-footed ferrets, Eld's deer, Guam rails, and other endangered species. Success in breeding black-footed ferrets and Guam rails has been extremely encouraging, and Center staff is now participating in reintroduction efforts for both these species. In recent years, research on the Center's native flora and fauna has increased substantially, focusing on the conservation of migratory birds and the effects of herbivores on the overall wildlife community. In cooperation with the National Park Service and U.S. Forest Service, major experimental study plots have been established in several locales at the Center and within the adjacent Shenandoah National Park.

The Zoo staff continues to play a leading role in international conservation through the wildlife and zoo animal management training programs for developing countries. These courses have provided training to more than 800 students and professionals from more than 50 countries. The Center has developed and continues to maintain CONSLINK, an international computerized conservation bulletin board, and Center staff has organized international workshops on microcomputer data management and analysis in India, Malaysia, and Sri Lanka. The Center also is playing a leading role in the coordination of major biodiversity conservation centers in China, Malaysia, and Sri Lanka.

The Smithsonian Migratory Bird Center - Established in FY 1991, the Center is located in a modular building at the National Zoological Park. The Center's mission is to acquire and disseminate scientific information to help conserve birds that migrate from North America to the tropics. To accomplish this mission, the Center initiates long-term research and training in Mexico; develops innovative bilingual (English/Spanish) outreach materials; and supports basic research projects on the population biology of migratory birds. In addition, the Center's staff responds to public inquiry on bird migration and consults with nongovernmental groups and Federal agencies on issues related to migratory bird conservation.

EXPLANATION OF PROGRAM INCREASE:

Infrastructure and Collections Management Support (5 workyears and $179,000) - The National Zoological Park is requesting a Biologist; three Animal Keepers; and one Tropical Gardener to fully staff and support its Amazonia Complex.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds come from a variety of sources, including allotments and fees for services and general use of the facilities by Trust fund units or outside organizations. The Zoo uses these funds to support and maintain its facilities, purchase plants and animals for the collection, and support the salary and travel costs of the director.

Restricted Funds - Gifts and foundation grants support training programs, research projects, and the acquisition of animals for exhibit purposes. Since FY 1990, the Zoo has received substantial outside funding to support the training of zoo professionals from developing nations in wildlife management, conservation, and zoo management. This program will continue in FY 1993 and throughout the planning period. Since its creation in 1986, the New Opportunities in Animal Health Sciences Center has continued to receive financial support for its programs in biomedical research.

Government Grants and Contracts - The National Zoo receives direct and indirect support from various Government agencies and departments to support specific research projects. Zoo researchers, in collaboration with investigators from the National Cancer Institute, have studied the effects of genetic monomorphism on reproductive performance, endocrine status, and animal health. The research staff received financial support from the National Institutes of Health to study in vitro fertilization in domestic and nondomestic cat species. In association with the Department of Agriculture, the Zoo is expanding research efforts in sperm and embryo preservation, genetic engineering, and artificial breeding of domestic animals. With a grant from the Department of Health and Human Services, the Zoo's medical staff is investigating the characteristics of a new primate hepatitis virus.

Smithsonian Institution Archives

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	25	1,229	2	71	-	-	-	1	-	-
FY 1994 Estimate	25	1,248	2	73	-	-	-	-	-	-
FY 1995 Estimate	25	1,613	2	73	-	-	-	-	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Office of Smithsonian Institution Archives (OSIA) is the official repository for the records of the Smithsonian Institution as well as the center for information on the history of the Institution and its National Collections. OSIA is the Institution's means of assuring systematic and comprehensive historical accountability of its national public trust. OSIA supports Smithsonian research, management, and planning; serves scholars and responds to public inquiries; and provides advice to archival, registrarial, and historical research programs in and outside the Institution. As the Smithsonian grows and diversifies, OSIA preserves and manages a constantly increasing volume and an ever-changing technological variety of Institutional records and other pertinent historical documentation. As a result of the Institution's Restructuring Plan, implemented in FY 1993, the mission and assets of the Office of the Registrar and the Joseph Henry Papers Project were merged with the Smithsonian Institution Archives to form the new office.

For FY 1995, OSIA requests an increase of $365,000 for rental space for storage and archives processing.

PROGRAM - The Office of Smithsonian Institution Archives assures the Regents, Secretary, and staff of a reliable and accessible record of Institutional history and of the National Collections whenever they need broad understanding of their evolution and specific evidence of particular developments. The Archives Division surveys official records and scholarly research files, appraises their historical research potential, accessions those of lasting informational value, disposes of the remainder, preserves documentation in a wide variety of formats, arranges and describes materials so that they are useful for research, and provides reference service on its holdings. The Institutional History Division conducts research on the

history of the Institution, records oral history interviews to supplement documentation in the Archives, and publishes edited collections of historical documents relating to Joseph Henry, the first Secretary of the Smithsonian. The National Collections staff collects, analyzes, and reports statistics and other information on management of the National Collections and facilitates coordination of collections management among the museums and other collecting organizations of the Smithsonian Institution. OSIA staff share expertise in the areas of archives and collections management, oral history, and documentary editing with other archives and museums.

Specific accomplishments in FY 1993 include programs in collections acquisitions and records scheduling, archives management, research and reference services, historical research and publication, collections management, and outreach.

Collections Acquisitions and Records Scheduling - Notable OSIA accessions during FY 1993 included the records of several offices in the National Museum of Natural History and the personal papers of such scholars as J. Laurens Barnard and S. Dillon Ripley. Archivists conducted record surveys and prepared schedules for 17 Smithsonian offices, with special attention to exhibition records.

Archives Management - Archives staff focused efforts on revising the Guide to Smithsonian Archives, writing 80 entries describing 860 cubic feet of records and special collections. OSIA also published volume 3 of the multi-volume Guide to Photographic Collections at the Smithsonian Institution and collection-level guides for six historical document collections, including the Guide to the Edward William Nelson and Edward Alphonso Goldman Collection and Guide to the Records of the Office of Public Affairs, National Zoological Park.

Research and Reference Services - Researchers used OSIA holdings in a number of publications, among them Debra Lindsay, Science in the Subarctic: Trappers, Traders, and the Smithsonian Institution, and E. F. Rivinus and E. M. Youssef, Spencer Baird of the Smithsonian, both published by Smithsonian Institution Press. Scholars conducted research on such topics as the atomic tests at Bikini, women naturalists, the history of the Smithsonian Institution Building, and biological surveys of Texas.

Historical Research and Publication - The Institutional History Division began several major research and data-base projects in anticipation of the Institution's Sesquicentennial in 1996 and prepared four oral history collections for research use. Documentary editing staff completed the manuscript for volume 7 of The Papers of Joseph Henry.

Collections Management - In addition to the seventh annual collections statistics and compliance report, National Collections Division staff coordinated reviews of collections management policies at three bureaus, completed a study of classification standards for museum specialist and technician positions, and completed a survey of automated museum collection documentation for the International Council of Museums.

Outreach - Archival and museum personnel from Japan, Senegal, Ireland, and Scotland were among the many visitors to OSIA for archives and collections management, oral history, and documentary editing information. Several lectures were delivered on OSIA holdings to general and scholarly audiences.

Statistical Summary of OSIA Activity	FY 1991	FY 1992	FY 1993
Accessions added during year (cubic meters)	36.13	35.49	35.62
Accessions added during year (cubic feet)	1,276	1,253	1,258
Total holdings at year-end (cubic meters)*	491.08	526.57	554.76
Total holdings at year-end (cubic feet)*	17,342	18,595	19,584
Reference inquiries	1,584	1,866	1,831
Items provided to researchers	7,491	6,963	5,455
Pages of copy provided to researchers	23,407	31,997	26,213

*Total holdings include both accessions and record center holdings. In FY 1993, OSIA discarded more records at its record center than were transferred to the center.

EXPLANATION OF PROGRAM INCREASE:

Rental Space for Storage and Archives Processing ($365,000) - This request is for rent and equipping of 6,000 square feet of storage space for the Institution's archives in order to keep up with current growth rates and accommodate vital records.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Provided by annual allotments, these funds cover the salaries, benefits, and support costs for an archivist and an archives technician.

Restricted Funds - Support from the National Academy of Sciences for the Joseph Henry Papers Project pays for incidental programmatic items not otherwise funded, including journal subscriptions and additions to the Joseph Henry Papers research collections. A grant from the Ida Hornstein Reingold Memorial Fund supports the scholarly activities of the Joseph Henry Papers Project.

Smithsonian Institution Libraries

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	109	6,555	12	692	-	13	-	5	-	-
FY 1994 Estimate	109	6,619	12	711	-	13	-	5	-	-
FY 1995 Estimate	109	6,719	12	711	-	13	-	5	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Smithsonian Institution Libraries (SIL) supports the mission of the Smithsonian Institution "for the increase and diffusion of knowledge" by providing access to information in all forms to Smithsonian scientists, scholars, curators, and staff, as well as others with research needs. The Libraries accomplishes this support by building, organizing, managing, housing, and preserving collections; by providing reference services and consultation; by employing all appropriate technologies for finding and disseminating information; and by contributing to and drawing from remote data bases. The Libraries offers educational opportunities, including exhibitions, internships, publications, lectures, and user instruction. The Libraries participates in local, national, and international networks and cooperative activities that promote the sharing of information, access to recorded knowledge, and the support and advancement of scholarly communication.

For FY 1995, SIL requests an increase of $100,000 for inflation in the acquisition costs of journals and books.

PROGRAM - The Smithsonian Institution Libraries (SIL) supports multi-disciplinary research at the Smithsonian Institution by providing research support services, collections acquisitions and management, and outreach programs. SIL staff uses electronic information technology for most internal library operations. Electronic tools aid in resource sharing and communication with other libraries and information repositories. SIL's collections contain more than 1.1 million volumes and include 15,000 journals, 40,000 rare books, and more than 1,800 manuscript units. By centralizing acquisitions and cataloguing activities, reference and information services, preservation and conservation efforts, and administrative services, SIL gains operational and cost efficiencies.

SIL houses its collections in Smithsonian buildings in Washington, D.C., and other locations, including Edgewater, Maryland; Cambridge, Massachusetts; New York, New York; and the Republic of Panama. SIL joins these collections into a single resource by using the latest information technologies. SIL controls its collections and makes them available to researchers at the Institution and worldwide, systematically describing materials and entering them into the Smithsonian Institution Research Information System (SIRIS) on-line catalogue and into the On-line Computer Library Center (OCLC), a national bibliographic data base. SIL continues to supplement in-house cataloguing with contract catalogUing and conversion of manual records to machine-readable data.

Research Support Services - SIL directly supports researchers from 18 branch libraries. All branches offer sophisticated information access technology, rapid document delivery, and specialized subject expertise to assist users with their information and research needs.

During the past year, SIL increased information access capabilities offered to its users by expanding existing commercial data-base services and adding new bibliographic search services. By joining the Research Libraries Group (RLG) SHARES program, SIL further enhanced access and delivery of information. The director appointed a task force on electronic information resources to develop a long-range strategy for using electronic information and improving access to resources required by Smithsonian. The committee will report in early 1994. The SIL Users Advisory Committee met several times to consider issues affecting SIL policies and service to researchers across the Institution.

Support services at the branch libraries concentrated on a variety of efforts. SIL staff continued to plan the National Museum of the American Indian Branch Library to be located at the Museum's Cultural Resources Center at Suitland, Maryland. SIL catalogued the Museum's Resource Center books, adding them to the SIRIS on-line catalogue. The new National Postal Museum Branch Library, which opened in July 1993, offers state-of-the-art research services. SIL staff began defining library support for the proposed National African American Museum. Working with staff from the National Museum of Natural History, SIL staff refined design concepts for the Special Collections facility to be located in the Museum's East Court Building, currently under construction. When fully staffed, the facility will offer enhanced scholarly access to the Museum's fine special collections while providing secure, environmentally sound housing.

Collections Acquisition and Care - SIL acquires materials through purchase and through a gift and exchange program with 4,094 partners in 122 countries. Again in 1993, escalating journal costs reduced SIL's ability to supply the same titles available in the past and prevented SIL's purchasing materials to support Institutional initiatives. With funding provided in FY 1993 as part of the Institution's internal restructuring process, SIL was able to restore approximately half the previous book budget. Facing a projected 10-15 percent inflation of journal prices expected for 1993, SIL canceled nearly $40,000 in subscriptions.

In 1993, the Preservation Services Department established a new commercial binding contract and prepared written policies governing SIL binding practices. The Department placed substantial contracts for microfilming of brittle materials based on the recently completed pilot project. During FY 1993, the staff selected many Native American language materials from the Anthropology Branch Library for preservation.

In 1993, SIL purchased NOTIS, an integrated library system, to upgrade SIRIS. SIL staff worked intensively to meet an ambitious schedule for implementing SIRIS, installing communication lines and systems hardware, training staff, and testing and correcting data while devising and refining the necessary interfaces with other systems, including national data bases and the Smithsonian's financial accounting system. In addition to SIL, the largest user, SIRIS supports the work of nine Smithsonian units.

Outreach - SIL serves the wider community and public through outreach programs including publications, lectures, and exhibitions. The National Museum of African Art Branch Library staff published two major works this year: volume 2 of The Arts of Africa: An Annotated Bibliography, 1988, and Nigerian Artists: A Who's Who and Bibliography introduced at a May 1993 symposium in Lagos, Nigeria. Supported by the Dibner Fund, SIL offered an illustrated lecture on Renaissance emblem books, entitled "The Book of Nature," by Professor William Ashworth of University of Kansas. Ann Okerson, Association of Research Libraries, presented "The Internet and Scholarly Publishing: The Day after Tomorrow" to the Institution's staff in November 1992. For Black History Month, SIL and the National African American Museum Project co-sponsored a talk by Charles L. Blockson of the Blockson Afro-American Collection at Temple University, Philadelphia, who described his 50 years as a collector of African American history. SIL's exhibition "Science in the Age of Columbus" opened Columbus Day 1992 in the National Museum of American History. In September 1992, the Libraries provided faculty for a National Associates' three-day seminar on rare books, and in January 1993, library staff presented a "Rare Books at the Smithsonian" Resident Associates Tour. The Natural History Branch Library Open House attracted researchers to demonstrations of new information technologies and natural history drawings on long-term loan by the artists.

SIL's first postgraduate resident began a year working in all divisions of the Libraries. The resident program broadens the cultural diversity of SIL and the library profession by providing an educational experience to enhance the career potential of minority library professionals.

Funded by the Institution's Special Foreign Currency Program, SIL administers the Science Information Program for translations, which has brought 273 translations of books into print since 1960. The Libraries published six new translations during FY 1993, with 18 translations in process.

EXPLANATION OF PROGRAM INCREASE:

Inflation in the Acquisition Costs of Journals and Books ($100,000) - Requested funds will enable SIL to mitigate the impact of continued and extraordinary inflation in journal subscriptions and book prices, allowing the Institution to support scientific research programs and cultural diversity initiatives.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - An administrative allotment funds administrative salaries and related support costs, including travel, training, and supplies. A program allotment supports special events such as public lectures and seminars.

Restricted Funds - SIL continues to build the fund-raising and development program begun in 1991. In September 1993, the Smithsonian held an 80th-birthday celebration dinner for S. Dillon Ripley, Secretary Emeritus, at which the establishment of the S. Dillon Ripley Library Endowment for the General Collections was announced. Based on a series of successful auction sales of duplicate rare books concluded in June 1993, SIL established an acquisitions endowment for the purchase of rare books and special collections. The Seidell Endowment Fund awarded SIL a grant for processing part of the Trade Literature Collection. SIL received a grant from the Women's Committee for software to make the on-line systems of SIL accessible to individuals with visual impairments. Funding from the Dibner Fund was received to support two scholars for the SIL/Dibner Library Resident Scholar Program to promote the study of the history of science and technology. Two events were held as benefits for the Cooper-Hewitt Branch Library.

International Environmental Science Program

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	15	760	-	-	-	-	-	-	-	-
FY 1994 Estimate	15	768	-	-	-	-	-	-	-	-
FY 1995 Estimate	15	768	-	-	-	-	-	-	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The International Environmental Science Program (IESP) is a multi-bureau interdisciplinary effort to coordinate the Smithsonian Institution's long-term monitoring and study of unique and significant ecosystems. The goal of the Program is to evaluate and eventually to predict the impact of human activities and natural change on selected ecosystems. Research sponsored by IESP occurs at two permanent Smithsonian sites--the Smithsonian Tropical Research Institute (STRI) in Panama and the Smithsonian Environmental Research Center (SERC) in Edgewater, Maryland--and several nonpermanent sites throughout the world.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the International Environmental Science Program.

PROGRAM - The International Environmental Science Program supports Smithsonian research to meet the urgent need for long-term studies of the world's ecosystems, especially in tropical and subtropical regions where the rapid rate of tropical deforestation, loss of suitable soil, and resulting threat to wildlife are of critical importance to biological diversity and global change. The Program provides funds for teams of scientists, both Smithsonian staff and collaborators, to monitor natural variations in specific environments undergoing human change.

Scientists maintain permanent IESP research sites at the Rhode River Estuary at Edgewater, Maryland, and in the tropical lowland forest of Barro Colorado Island (BCI) in Panama and the Galeta Reef on the Atlantic side of the Isthmus of Panama. For more than 20 years, scientists have gathered information for a data base on the biological, physical, and chemical components of various ecosystems. Analyses of these data have produced speculations

and verifiable hypotheses about long-term patterns in climate and disturbances resulting from human activity.

Research sponsored by IESP also takes place at nonpermanent sites on Aldabra in the Seychelles and in Venezuela, Brazil, Mexico, and the Amazonian regions of Peru and Bolivia. Smithsonian scientists, with support from the host governments, are continuing their efforts at these sites to gather descriptive data.

The following summaries highlight IESP's most significant accomplishments for FY 1993 at the Program's permanent and nonpermanent sites.

Edgewater, Maryland - For 19 years, a series of water quality parameters have been monitored in the Rhode River, a tidal river system. Trend analysis and studies of the Susquehanna River watershed discharges support the hypothesis that chlorophyll concentrations in the Rhode River in the spring are controlled by nitrate inputs from the Susquehanna, while in summer they are controlled by the regeneration of inorganic nitrogen from organic matter produced in the spring. Data on phytoplankton chlorophyll, total suspended particles, and forms of phosphorus, nitrogen, and carbon show that despite major efforts to improve the management of nutrient inputs to the Chesapeake Bay, concentrations of key dissolved nutrients have not changed significantly over the past 19 years.

Panama - STRI has reorganized its International Environmental Science Program (IESP) to integrate data on population fluctuations of critical animals and plants. STRI will sustain its long-term monitoring of insect, amphibian, mammal, and bird populations by surveys and censuses on Barro Colorado and in Soberania National Park. The fruiting and flowering cycles of certain trees are also monitored, and the program attempts to explain relations between animal populations and plant food sources. Recruitment and reproduction monitoring of corals, urchins, macro algae sponges, and fish on a set of reefs near Galeta and San Blas, on the Caribbean side of Panama, are conducted jointly by four STRI researchers. A dramatic regional decline in coral reef growth and catastrophic local effects of a major oil-spill in 1986 are among the more important environmental changes currently being evaluated. To underpin the biological monitoring, STRI has four sites along a transect from the Pacific to the Caribbean in which physical variables, including rainfall, solar radiation, tides, temperature, and water chemistry, are systematically measured. All biological and physical data are incorporated into a single STRI-IESP data system.

Aldabra - A study of the age and size structure of the giant tortoise of Aldabra is ready for publication. The study indicates that the population may be in decline in the face of intense competition for food. Also, IESP staff continued analysis of stomach contents from Aldabran hawksbill and green turtles, and completed a preliminary report on the status of the green turtle population of the nearby Comoro Islands. As part of the ongoing Marine Invertebrate Program, one scientist prepared a paper on several new species of polychaete worms, along with their reproductive patterns, and submitted it for publication. Participants in the World Heritage

Program continued preparing a marine and terrestrial faunal list for Aldabra. Searches of the National Museum of Natural History's computerized collection data base yielded many unpublished records; a compilation of published records for almost 100 years of research is approaching completion.

Venezuela - A continuing 17-year demographic study of several social groups of the red howler monkey helped document infant adoption and incest avoidance in this species. These findings help set in context long-term strategies for managing this significant group of primates in the wild and in zoos.

Brazil: Golden Lion Tamarin Project - By May 1994, 34 of 129 reintroduced tamarins bred in zoos (26 percent) remained from those released between 1984 and 1992, and 74 young survived from 100 born (74 percent). Altogether, there are 112 more tamarins in the wild as a result of the Institution's reintroduction program, making this one of the most successful animal reintroduction programs ever undertaken.

The Poco das Antas Reserve was seriously damaged in early 1990 by a major fire that broke out during an unusually dry wet season. Nearly 25 percent of the Reserve was burned, and scientists estimate that forest regeneration was set back up to ten years. The fire also delayed efforts to increase the small population of golden lion tamarins within the Reserve. Scientists are continuing several projects to chart the effects of the fire and have initiated several experimental reforestation projects. Findings will help scientists and land managers understand how to rehabilitate damaged ecosystems in the tropics. During 1992, an experimental Ecotourism project was developed; numerous members of Congress visited this Program during the United Nations Conference on the Environment and Development in Rio de Janeiro.

Latin America: Neotropical Lowland Research Program - In FY 1993, scientists conducted laboratory work in archeology, botany, entomology, herpetology, and ichthyology on the lowland forest biota. Fieldwork was undertaken in Brazil, Colombia, French Guiana, and Peru. Results of these investigations provided a new information on the composition and distribution of the neotropical biota that is important for conservation planning and the completion of several major publications. An example of an outreach spinoff is an intensive graduate course on the evolution of plant pollination systems that one of the program scientists was invited to present at the Universidad Nacional de Colombia. The course, centered in Bogota and combining lectures and field trips, proved very successful.

Mexico - In 1993, scientists and volunteers continued several projects designed to quantify how a dry tropical forest recovers from hurricane and fire damage. Recovery of the forest from Hurricane Gilbert's damage in late FY 1988 has been faster than recovery from the major fire in late FY 1989. Most processes (such as tree growth rates of leaf litter production) have returned to pre-hurricane levels in areas affected by the hurricane, but recovery has been slower in burned areas because most of the trees were killed. Reproductive output (seeds and fruits) of the forest continues but is still less than it was prior to the hurricane. After five years,

the bird community is similar to what it had been before the hurricane. Tree growth data from the project greatly benefited the development of a regional plan for sustainable forestry. These data were used to calibrate growth models for a regional sustainable forestry effort called the "Plan Piloto Forestal."

Major Scientific Instrumentation

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	-	7,939	-	-	-	-	-	-	-	-
FY 1994 Estimate	-	7,291	-	-	-	-	-	-	-	-
FY 1995 Estimate	-	7,930	-	-	-	-	-	-	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The development of major scientific instrumentation is vital to enable Smithsonian scientists to remain at the forefront of their fields. Because of the magnitude of the costs and the time scale required to fabricate major new instruments and to reconfigure existing ones, the Institution requests funding for such projects under this line-item, rather than under individual bureau line-items. Since these projects will, of necessity, require long-term development and multi-year funding, the Institution also requests that funds in this line-item be available until expended.

For FY 1995, the Institution requests no-year funding of $7,930,000 to continue construction of the submillimeter telescope array ($5,920,000) and to continue conversion and development of instrumentation for the Multiple Mirror Telescope (MMT) ($2,010,000). The FY 1995 request reflects an increase of $639,000 over the FY 1994 base.

PROGRAM - The development of major scientific instrumentation, such as modern telescopes, requires research and development (R&D) over an extended period of time. Teams of Smithsonian scientists, technicians, and contractors, focused on critical telescope elements such as optics, detectors, receivers, and support structures, are engaged in these R&D efforts. To facilitate the unique extended R&D efforts that are critical to the completion of major scientific instrumentation, the Institution established this no-year line-item in the FY 1989 budget.

Since FY 1989, the Smithsonian has requested funding under this line-item for two projects for the Smithsonian Astrophysical Observatory:

- development of an array of submillimeter telescopes; and
- conversion of the Multiple Mirror Telescope (MMT).

Both of these forefront scientific projects involve the fabrication of major new instrumentation that will take a number of years to complete. SAO expects the submillimeter telescope array to be completed in FY 1997. Annual operating costs are expected to be about 8 - 10 percent of the construction costs. Almost all operating personnel will be hired during the design and construction phases of the project and will already be included in the SAO base when operations commence.

SAO expects "first light" for the converted MMT in 1996. SAO originally estimated that the total cost to the Smithsonian for the conversion would be no more than $10 million (1987). Except for the effects of inflation, SAO's estimate is unchanged, $11.1 million (1993).

EXPLANATION OF PROGRAM INCREASE:

Construction of an Array of Submillimeter Wavelength Telescopes ($550,000):

Scientific Justification - The last frontier for ground-based astronomy consists of observing the skies with telescopes sensitive to submillimeter waves, light with wavelengths between those of infrared and radio waves. Only in the past few years has technology advanced sufficiently to allow the construction of telescopes that can observe the universe at submillimeter wavelengths. SAO's efforts to build a submillimeter wavelength telescope array will lead to fundamental contributions to astronomy and astrophysics in several areas:

(1) For studies of star formation, the array will be used to map the structure and motions of the disks that eventually contract into stars. The array offers the prospect of detecting and studying gas falling into very young stars and, thereby, gaining detailed knowledge of how stars are formed. With unprecedented resolution and sensitivity, the array will also provide images of high-velocity gas flows from recently formed stars. These images will elucidate the mechanisms that limit the growth of a star and will help answer a fundamental question: Why is the Sun the size it is?

(2) Use of the array will generate new information about galaxies. Detailed maps of the emission from carbon monoxide molecules will provide the first clear view of the spiral structure of galaxies outlined by giant molecular clouds. The array will also allow astrophysicists to study the emission from the dust surrounding young stars in galaxies. Study of these emissions will reveal centers of star formation not visible with optical telescopes. These two new views of galactic structure will expand understanding of the now mysterious ways that spiral patterns in galaxies originate and sustain themselves.

(3) Because of its high sensitivity, the array will provide accurate measurements of the submillimeter wavelength emission from quasars and active nuclei of galaxies. These measurements will clarify the relationship between enormously energetic objects and may reveal

the source of their energy. These measurements also could be crucial to distinguishing between the mechanisms leading to quasars that emit radio waves and those that do not. An explanation for these mechanisms is one of the most important unsolved enigmas in the quest for understanding the source of the prodigious energy emitted by quasars.

(4) The array will give new information about the surfaces and atmospheres of planets and other objects in the solar system. Maps of Mercury, Mars, Saturn's rings, and some dozen additional bodies--asteroids and satellites--will reveal the temperature and structure immediately beneath the surface. This information is needed to understand the nature of the subsurface composition. New data gathered on emission from molecules in the atmospheres of Venus and Saturn's satellite Titan should also provide insight into planetary weather.

(5) Finally, the array is likely to make unexpected discoveries. Only a few telescopes will be able to work at submillimeter wavelengths. The array's ability to discriminate spatially will be at least ten times greater than that of any of these other, single, submillimeter telescopes. If the past is any guide, this unique capability should lead to important serendipitous discoveries.

In 1982, the ten-year plan of the Astronomy Survey Committee of the National Research Council (NRC) recognized the desirability of submillimeter wavelength observations. Several single-antenna telescopes capable of such observations are now under construction or in operation. These telescopes will dramatically advance the field. None of them, however, will be able to discern details finer than about 10 seconds of arc. This limitation means that their resolving power will be less than one-tenth of the leading astronomical instruments in other wavelength regions, such as the Very Large Array (VLA) of radio telescopes.

The NRC study also recommended development of advanced spatial interferometers at all wavelengths to improve resolving power. SAO's submillimeter wavelength telescope array will be a premier response to the NRC's recommendation. It will have a resolving power of better than 1 second of arc, far finer than for any single-antenna submillimeter wavelength telescope and comparable to that of the VLA.

In 1991, the ten-year plan of the Astronomy and Astrophysics Survey Committee of the NRC called the 1990s the Decade of the Infrared. "The infrared and submillimeter portion of the spectrum, from 1 micrometer to 1000 micrometers, is poorly explored but is of fundamental importance for almost all aspects of astronomy, from solar system studies to cosmology." The Committee added that important new initiatives include the Smithsonian Institution's submillimeter array which "will make subarcsecond images with high spectral resolution for the first time in this important wavelength band."

Status and FY 1995 Plans - Soon after beginning its submillimeter program in FY 1987, SAO began assembling a scientific and engineering team to develop the array and its associated high frequency receivers. The initial staff worked with industry and leading consultants to prepare a lengthy design study on the instrument and the various siting options. In January

1991, the preliminary design and the site data were presented to the project's 15-member Scientific and Technical Advisory Group, created in 1989 to help guide the project during its multi-year development. This group of preeminent scientists recommended that the array be located on Mauna Kea in Hawaii. This recommendation was accepted. Work was begun on the high frequency receivers and the electronic systems. Meanwhile, the design of the instrument and the construction plan were finalized and reviewed by the same group of experts in September of 1992.

In FY 1993, the project team began constructing components for the submillimeter array of telescopes, especially the six antennas that form the heart of the array. The design team was able to let bids and contract for most of the antenna components, including the large rubber-tired transporter that moves the 30-ton antennas between the observing pads. In addition, a temporary observing site in Westford, Massachusetts was prepared to allow the assembly and test of the antennas and electronic systems prior to their deployment at the high altitude location. Work continued on the design and construction of prototype high frequency receivers as well as the state-of-the art fiber optic communication system that transfers data between the antennas. Negotiations with the University of Hawaii regarding the use of the Mauna Kea site were nearly complete at fiscal year's end.

The goals for FY 1994 include the funding of the detailed design for the facility on Mauna Kea, the funding of the infrastructure contributions, and the completion of the complicated permit process. The project also expects to equip the Westford site and to complete the assembly of the transporter and first antenna, with the other antennas being in various stages short of completion. The first receiver will be readied for a test at Westford. Construction will also begin on the prototype of the correlator, the very large, special purpose computer that decodes the signals from the antennas to reconstruct the radio images of the sky.

For FY 1995, the Institution requests a total of $5,920,000 for the submillimeter array program. This funding represents an increase of $550,000 from the FY 1994 base. Funds will be used to continue the assembly and testing of the remaining antennas at Westford and the construction of the Mauna Kea site including the associated electronics. The proposed FY 1995 expenditure of funds is as follows:

	($ millions)
-- Continue outfitting and testing the six antennas and carrier at Westford	1.2
-- Contract for site preparations on Mauna Kea	2.6
-- Fund construction of receivers for Mauna Kea	1.1
-- Build electronic systems for Mauna Kea	0.6
-- Administrative expenses and general supplies and equipment	0.4
Total FY 1995 Costs	$5.9

Funding for the staff required for the submillimeter telescope array is included in the SAO line-item. The FY 1995 budget request for SAO includes a program increase of six positions to hire six people to staff the Mauna Kea site (6 workyears and $319,000). These staff will include: a lead observer, a mechanical leader to oversee the assembly and maintenance, three technicians, and a secretary. These staff are needed to prepare the infrastructure on the summit of Mauna Kea (the control laboratory, the communication links, the data lines to the observing pads, etc.) to accept the first of the antennas in mid-1996. The staff members will be permanently based in Hilo, Hawaii, but some will train to operate the instrument by participating in the assembly and testing at Westford. The rental costs on the office space in Hilo are not expected to change in FY 1995.

Project Schedule - The multi-year construction schedule for the submillimeter array began following the design study phase in FY 1991 and is now planned for completion in FY 1997. The following chart shows the total funding required for the project from FY 1989 until the completion of the instrument on Mauna Kea in FY 1997, including allocations already made. Total cost estimates for the array have remained stable throughout its development of the system when corrected for inflation.

PAST AND PROJECTED FUNDING FOR THE SUBMILLIMETER TELESCOPE ARRAY
FY 1989 THOUGH FY 1997
(actual through FY 1993)

	APPROVED/ REQUESTED FTE	EXPENSES ($ millions)[1,2]
FY 1989	3	0.8
FY 1990	6	1.6
FY 1991	12	3.6
FY 1992	18	6.4
FY 1993	22	6.9
FY 1994	22	7.1[3]
FY 1995	28	7.9
FY 1996	34	6.9[4]
FY 1997	34	5.7[4]
TOTAL	178[5]	$46.9

[1]Rounded to the nearest $100,000.
[2]Includes all personnel costs.
[3]Request now pending before Congress
[4]Projected costs in 1993 dollars
[5]Cumulative work-year requirement over nine-year period.

Conclusion - When operational the SAO submillimeter telescope array will be a major scientific instrument of international stature. The array will be unique in the world in its combination of wavelength coverage and resolving power. It will therefore measurably enhance the scientific competitiveness of the United States.

Conversion and Instrumentation of the Multiple Mirror Telescope (MMT) ($89,000):

Scientific Justification - The conversion of the Multiple Mirror Telescope (MMT) to one with a single 6.5-meter diameter mirror will more than double the light-gathering power of the telescope and increase its field of view more than several hundredfold. The converted telescope and its new instrumentation will allow scientists to observe up to 300 objects simultaneously, an enormous increase in efficiency of data collection over that possible with the MMT.

One of the most surprising astronomical discoveries of the 1980s was the large patterns in the distribution of nearby galaxies. This striking feature of the universe has had enormous scientific impact and has also attracted great public interest. SAO scientists have played the leading role in mapping this distribution of galaxies in the "local" universe. They have discovered that galaxies are located on thin surfaces surrounding regions nearly devoid of galaxies, a structure reminiscent of soap bubbles. The converted MMT, equipped with instrumentation now being designed, will enable SAO scientists to answer the questions raised by this startling result that comes from study of the relatively nearby parts of the universe: (1) Is the distribution of galaxies viewed from the Earth characteristic of the universe as a whole? (2) Do even larger patterns in the galaxy distribution emerge when more of the universe is observed? (3) How has the galaxy distribution changed over cosmic time scales?

To answer these questions, the light from tens of thousands of remote galaxies must be analyzed. The converted MMT will have more than twice the collecting area of the existing telescope, but, far more importantly for this investigation (and many others), it will offer a field of view several hundredfold larger. Some 1,000 galaxies will be visible in this expanded field at the same time. However, the simultaneous study of the properties of a large number of galaxies will only be possible with the sophisticated new instruments currently being designed by SAO scientists (see below).

The expanded capability of the converted telescope thus will be especially beneficial for the study of clusters of stars and galaxies. SAO astronomers will be able to complete in a few hours projects which now require a month on the MMT. For example, SAO scientists will be able to conduct studies of the motions of clusters of stars which hold clues to their age and the age of our galaxy, an area in which SAO scientists have been among the world leaders. Similarly, the study of clusters of galaxies, hitherto prohibitively demanding of telescope time, would become feasible. Research on these clusters should yield the key to an understanding of the distribution of matter in the universe. This distribution has a fundamental bearing on the evolution of the universe, in particular on how galaxies formed--a question that has baffled scientists for decades.

In addition, it will be possible to measure the velocities of gas in very distant galaxies. Astronomers can then compare these velocities, which are often related to the intrinsic brightnesses of the galaxies, with the apparent brightnesses of the galaxies to determine their distances. This technique would allow researchers to determine the rate of expansion of the universe when it was younger. A measurement of this rate is critical to understand the evolution and ultimate fate of the universe: Will it continue to expand forever, or will it eventually collapse?

The increased collecting area will allow pioneering studies of certain rapidly changing astrophysical phenomena. In such cases, changes occur too rapidly for astrophysicists to study them with any of today's telescopes. For example, some of these rapidly changing processes take place in double stars. The members of these stars are so close to each other that their surfaces almost touch. Scientists similarly can study phenomena in systems with one star whose core is so dense that not even light can escape from it--a black hole. Such systems give rise to very unusual conditions; their study would be possible with the converted telescope and would allow scientists to gain insights into new physical processes.

Addressing such scientific questions requires the development of instruments matched to the capabilities of the converted MMT. A multi-object spectrograph will use 300 optical fibers acting as "light-pipes" to guide the light from the focus of the telescope to the input of the spectrograph. A high-speed robot positioner will move the fibers to the appropriate positions at the telescope focus. A program of observing tens of thousands of galaxies, which would otherwise not be feasible, could be carried out with ten to twenty nights of telescope time with this advanced instrument. The multi-object spectrograph will also be used for studies of clusters of galaxies and stars, for identification of sources of X-rays discovered using satellites, and for determination of the orbits of material in large, nearby galaxies. In each case, the new instrument will give the converted MMT the power of several hundred telescopes with conventional single-object spectrographs.

Two additional instruments that SAO proposes to begin in FY 1995 will allow SAO scientists to realize more of the potential power of the converted MMT: a very high resolution spectrograph and an infrared imager. These instruments will allow SAO scientists to use the converted MMT for a broad range of investigations, from the study of stellar systems containing neutron stars and black holes to the discovery of distant galaxies at the edge of the observable universe. The proposed new instruments are important tools for the study of star formation, which is a major scientific interest of many SAO scientists, as well as a major scientific target of SAO's submillimeter array of telescopes.

Status and FY 1995 Plans - With funding provided for the conversion project from FY 1987 through FY 1993, SAO ordered, received, and tested the glass required for casting the 6.5-meter mirror in the Steward Observatory Mirror Laboratory (SOML) at the University of Arizona; selected a consulting engineering firm and completed the conceptual and preliminary design for the building modifications, optical support structure (OSS), and primary mirror cell; and purchased the f/9 secondary mirror blank.

As part of its contribution to this joint project, SOML enlarged the casting furnace and constructed a mold and successfully cast the 6.5 meter mirror--the largest single mirror ever cast in the United States. SOML also polished two 3.5-meter diameter mirrors and a 1.8-meter diameter mirror, proving the capability of the "stress-lap" polishing technique developed by the laboratory and required to polish the 6.5-meter diameter mirror.

In FY 1993, SAO is issuing fabrication contracts for the building, optics support structure, and primary mirror support. The University of Arizona will finish cleaning the 6.5-meter primary mirror blank. In FY 1994, the surface of the 6.5-meter primary mirror will be given its initial shape and polishing will begin. The fabrication of the OSS, primary mirror cell, primary mirror support, and building modifications will also begin. SAO will order the blank for the f/5.2 secondary mirror and we expect that SOML will start polishing the f/9 secondary.

In FY 1992, SAO began work on the multi-object spectrograph. Major activities were the mechanical layout of the instrument and design of the equipment needed to construct the fiber optic probes. During FY 1993, the detailed design of the robot positioner and the optical spectrograph began. This design work will be completed in FY 1994.

The main conversion efforts in FY 1995 will be to finish fabrication of the OSS and the primary mirror cell and to finish polishing the 6.5-meter primary mirror. Also during FY 1995, SAO plans to purchase major components for the spectrograph and to begin to assemble the spectrograph and robot positioner as well as to start developing the sophisticated control software for this instrument. In addition, SAO intends to develop the initial design of the high resolution spectrograph and the infrared imager. This latter effort will begin with the detailed optical and mechanical design of both instruments.

Project Schedule - SAO expects "first light" for the converted MMT in 1996 at a total cost to the Smithsonian of $11.1 million (1993). This total includes Trust funds allocated in FY 1987 for the purchase of glass and refractories. The funding provided in FY 1988 was part of the one-year appropriation for SAO. Since FY 1989, the Smithsonian has requested and received funding for the MMT Conversion as no-year funding in this line-item. The breakdown of funds by year (actual for past years and 1993 dollars for present and future years) is shown in the following chart.

PAST AND PROJECTED FUNDING FOR CONVERSION OF THE MULTIPLE MIRROR TELESCOPE[1]
FY 1987 through FY 1995
(Actual through 1993)

	EXPENSES ($ millions[2])
FY 1987	0.5
FY 1988	0.5
FY 1989	0.6
FY 1990	0.9
FY 1991	2.0
FY 1992	2.4
FY 1993	2.3
FY 1994	1.6[3,4]
FY 1995	0.3[4]
TOTAL:	$11.1

[1]Does not include funding required to develop and build new instruments to be used with the converted MMT.
[2]Rounded to the nearest $100,000.
[3]Request now pending before Congress.
[4]Projected costs in 1993 dollars.

For FY 1995, the Institution requests a total of $2,010,000 to continue the conversion process and to build the highest priority instrument to begin the effective operation of the converted telescope. This amount represents an increase of $89,000 from the FY 1994 level of $1,921,000.

Conclusion - The MMT conversion and associated instrumentation is the most cost-effective way to ensure that Smithsonian astronomers will remain in the forefront of ground-based optical and infrared astronomy through the remainder of the 20th century and beyond.

National Museum of Natural History

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	623	35,572	3	392	2	1,532	-	6,588	17	708
FY 1994 Estimate	621	35,623	3	447	2	1,288	-	8,346	17	712
FY 1995 Estimate	621	36,623	3	447	2	1,288	-	8,346	17	712

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The National Museum of Natural History/Museum of Man (NMNH/MOM) is the largest research organization in the Smithsonian complex. Studies carried out by the Museum's staff--and by scientists worldwide using its collections--increase understanding of the diversity, abundance, and evolutionary relationships of plants and animals living today and in earlier periods and shed light on the origin and evolution of the Earth and solar system. Studies of different cultures enhance knowledge of cultural history and human adaptation to the environment, while research on human biological variation and evolution helps to uncover the history of humankind from Paleolithic times to the present. Through its many exhibits, educational programs, and scholarly and popular publications, NMNH/MOM disseminates knowledge about the natural and cultural diversity of the world. The Museum recognizes that, with more than six million visitors each year, it has a unique opportunity and responsibility for improving scientific literacy, and it is committed to presenting the best current scientific thinking in a stimulating environment. The Museum houses one of the world's largest and most valuable assemblages of natural history specimens and cultural artifacts. It acquires, preserves, cares for, studies, and interprets these vast collections and makes them accessible as an indispensable resource to the scientific community and public.

For FY 1995, NMNH requests $1,000,000 for major exhibition renewal ($425,000), collections care ($75,000), and improved safety and facility management ($500,000).

PROGRAM:

Research - The National Museum of Natural History is reviewing the hundreds of research projects conducted by its 116 staff scientists to focus its staff and resources on five

areas of emphasis: (1) biological diversity: systematics and evolution, (2) human cultural diversity, (3), ecosystem history and global change, (4) earth resources and planetary history, and (5) collections as global resources. Many of the individual projects contribute to an understanding of worldwide losses in biodiversity and the causes of global environmental change.

Current research results and initiatives include:

- The skin and feathers of an extinct, flightless ibis were discovered in a Hawaiian lava tube. These are the first feathers associated with a prehistorically extinct Hawaiian bird.

- NMNH forensic experts helped the Federal Bureau of Investigation retrieve and identify the remains of those who died in the Branch Davidian compound in Waco, Texas.

- Staff members are investigating ways in which the Museum can participate most effectively in the biological surveys now being planned by the Department of the Interior, the Department of Commerce, and the National Science Foundation. Tasks include helping the Department of the Interior to conceptualize the National Biological Survey, working out procedures and timetables for implementation, and developing a system for rapid retrieval of information in the Museum's huge collection base.

- Current concern over biodiversity loss and global change is now coupled with a growing movement in universities and colleges away from traditional organism-based programs in ecology and systematics. The Museum's Research Training Program, which trains students in basic systematic studies has, therefore, become critical. The ten-week summer intern program focuses on all natural history disciplines and exposes students to all facets of museum work. This year almost 600 students from more than 30 countries, including the United States, competed for 29 intern appointments.

- An NMNH paleobotanist and colleagues announced a major fossil discovery in the Wyoming Badlands, where a volcanic ash fall 72 million years ago preserved a vast area of the ancient landscape. This find casts doubt on the supposition that flowering plants quickly began to replace nonflowering plants soon after they evolved 120 million years ago.

- An article in the April 1993 issue of Science describes the recovery by an NMNH oceanographer of identifiable pottery fragments in a sediment core along the coast of the northern Nile Delta, which Egyptologists have identified as evidence of the northernmost Pharaonic site yet discovered in Egypt. Ongoing research

provides a basis for evaluating the profound impact of human activity and assessing future change in the Nile delta ecosystem.

- The recently funded Archaeobiology Program was established in new laboratory facilities at the Museum Support Center. Research focuses on the impact of humans on plant and animal populations through time, with an emphasis on the emergence of humans as a major force in the modification of the Earth's ecosystems. The program involves research, training, and outreach initiatives.

Publications - Among the Museum's hundreds of publications in 1992-93 was Mammal Species of the World, a new 1,300-page edition including a complete listing of all 4,629 species of mammals. Another major contribution toward defining biodiversity is the Checklist of the Plants of the Guianas, prepared in association with the Centre for the Study of Biological Diversity, University of Guyana. The Smithsonian Institution Press published A Guide to the National Anthropological Archives, describing the 6,000 linear feet of manuscripts housed in the hundred-year-old Archives. Quest, the newsletter begun in 1991 to explain in popular terms the Museum's many research efforts as well as to provide information on current events, won first place in the annual competition of the Society for Technical Communications and a bronze medal from the Council for Advancement and Support of Education (CASE).

Collections - The Museum purchased the John T. Polhemus Aquatic Heteroptera Collection of more than 300,000 "true bugs," enhancing research opportunities because of the wealth of material represented from outside the western hemisphere. Princeton University turned over its historic invertebrate fossil collection to the Museum in late 1992. The collection includes fine specimens of brachiopods, mollusks, trilobites, decapods, echinoderms, graptolites, and trace fossils ranging from the Precambrian to the Cenozoic.

In July 1993, the NMNH Repatriation Office returned for reburial human remains belonging to the Southern Cheyenne. Work continues on requests from the Pawnee, Paiute, Chugach Native Alaskan Corporation, Sisseton-Wapheton Sioux, Yankton Sioux, Kiowa, Arapaho, and Warm Springs Confederated Tribes.

Public Programs - NMNH attendance for 1992 reached 6.8 million, owing in part to the popularity of the Columbus Quincentenary exhibition "Seeds of Change." Articles about the exhibit circulated in newspapers and magazines around the country to more than 120 million people. The newly renovated O. Orkin Insect Zoo will reopen to the public on September 10, 1993. The Museum has temporarily closed the Africa Hall for evaluation and change. Meetings held with representatives from various African cultural groups have solicited ideas for changing the Hall, scheduled to reopen in 1994.

The first exhibit organized with the direct collaboration and participation of the Kiowa community was presented at the Museum from March through May 1993. "Saynday was coming along: Silverhorn's Drawings of the Kiowa Trickster," included original drawings and paintings by noted Native American artist Silverhorn (1861-1940). Five Native American contemporary-

traditionalist artists, poets, and scholars participated in NMNH program presentations during Native American Heritage Month.

NMNH is one of 16 Federal organizations selected to participate in a new four-week summer program that takes a unique approach to teacher retraining, combining classic instruction with hands-on experiences. This new initiative expands the Museum's existing Natural Science Institute, a month-long science education course that has trained more than 60 teachers to incorporate museum pedagogy and hands-on learning in the prekindergarten - grade 12 school curriculum. The program pairs teachers with museum educators, technicians, scientists, and national scholars in science and science education.

EXPLANATION OF PROGRAM INCREASE:

Improved Safety and Facility Management ($500,000) - This request is for essential staffing and operational costs for the newly constructed greenhouse in Suitland, Maryland, the Natural History Building safety program, and ongoing facility maintenance, planning, and construction coordination in the Natural History Building. No new positions are being requested as they will be reallocated from current Smithsonian workyear resources.

Major Exhibition Renewal ($425,000) - This proposed increase, being requested as no-year funds, will ensure continuation of a long-term plan for renovation of the permanent exhibits on a reasonable timetable, with special emphasis during this period on the Anthropological halls.

Collections Care ($75,000) - This request is for funds to strengthen the Museum's ability to fulfill its collections stewardship responsibilities by improving pest management capabilities, collections storage needs, eliminating "backlogs" of high interest collections, and assisting in preservation and conservation of targeted collections and associated documentation.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - The Museum derives funds from a variety of sources, including its share of net proceeds of the museum shops and food concessions. During FY 1993, allotments provided for the salaries of the Museum's director and two staff members.

NMNH benefits from the Institution's many awards programs, such as the Special Exhibition Fund, Collections Acquisitions Program, Research Opportunities Fund, Research Exchange Fund, and Scholarly Studies Program. Examples of awards in FY 1993 include support for studies on European-Inuit interactions, culture history, and global change, and on paleoenvironmental research in northern Pakistan. Also, support was received for plant collectors on Madagascar and the Comoro Islands; an interactive exhibit on spiders that will use high-tech films, fiber optic murals, and live and model specimens; and a Spanish-language brochure for the "Seeds of Change" exhibit.

Restricted Funds - The Museum receives support for specific programs and projects through donations from private individuals, foundations, and corporations. In December 1992, Mrs. James Stewart Hooker pledged $3 million toward construction of a new Geology, Gems, and Minerals Hall, expected to open in 1996. Two substantial donations have been made to create endowments, one from Johnson & Son and the other from a retired NMNH curator for entomological research. The MacArthur Foundation supported a Mangrove Education and Training Program, part of the Caribbean Coral Reef Ecosystem Program.

NMNH manages the Smithsonian Marine Station at Link Port (SMSLP), Fort Pierce, Florida. Hunterdon Endowment funds are dedicated to the basic operating support of this oceanographic research facility for use by Smithsonian and national and international visiting scientists. Seward Johnson Endowment funds provide for the support of the Johnson-Sea-Link submersible owned by the Harbor Branch Oceanographic Institution (HBOI), the host facility. NMNH is proceeding with a fund-raising strategy to support construction of a laboratory and residential facilities that will serve the mission of SMSLP and its research initiatives.

Government Grants and Contracts - These funds are provided by various government agencies and departments for special projects conducted at the Museum to take advantage of its unique scientific expertise in systematics. The Department of Defense is funding a project for preservation and analyses of fossil birds in Hawaii. An Ethyl Corporation grant supports excavations in the Richmond, Virginia Penitentiary site for research on skeletal remains.

Conservation Analytical Laboratory

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	42	2,683	-	-	-	70	-	25	-	-
FY 1994 Estimate	42	2,735	-	-	-	-	-	-	-	-
FY 1995 Estimate	42	2,735	-	-	-	-	-	-	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Conservation Analytical Laboratory (CAL) located at the Institution's Museum Support Center in Suitland, Maryland, is the Smithsonian's specialized research facility for the conservation and technical study of museum objects. CAL helps the Smithsonian and other museums in the study, preservation, and conservation of objects of artistic, scientific, cultural, and historical importance. CAL staff examines the conservation-related properties of these materials, extracts historical information from their technical record, and improves conservation treatment technology. Staff conservators apply the knowledge gained from scientific research directly to the actual treatment of objects. Experience with a wide range of materials and expertise in analytical and technological studies enable CAL to engage successfully in collaborative research with anthropologists and art historians. The wide variation in the state of preservation of objects in the National Collections provides the overview needed to define directions in conservation research. CAL also conducts a conservation training program that includes basic and advanced conservation theory and technique, supports and organizes workshops and seminars, and disseminates the latest knowledge in the field of conservation and cultural materials research to museums and research professionals throughout the United States and the world.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the Conservation Analytical Laboratory.

PROGRAM - The major programs of CAL are archaeometry, conservation research, conservation training, and technical information. These programs, while distinctive, share methodologies and requirements for equipment and staff expertise. Hence their integration within CAL produces a strong, positive, mutual reinforcement.

Archaeometry - In this program, physical and natural scientists collaborate with scholars from the arts and humanities to address questions of an art historical or archeological nature. A number of techniques used in these programs require specialized facilities that CAL, in collaborative agreements with the National Institute for Standards and Technology (NIST), operates at the latter institution.

Research at CAL, in collaboration with an excavation project at the third millennium B.C. site of Goltepe in Anatolia, Turkey, provided an answer to the long-standing question surrounding the possible sources of tin used in the manufacture of early Near Eastern bronze. While other sources may well have been employed, the results of technical research on remains of crucibles and slags found at this early Bronze Age mining site provide strong evidence that this mine was a major production center for tin, refined on site from the ore extracted from the mine.

Technological studies on Paleolithic ceramics from Eastern European sites have established the existence of a ceramic technology long before its practical application to the production of vessels. The well-known Venus of Dolni Vestonice is an example of figurines produced around 26000 B.C., apparently for ritual purposes that involved their destruction. Interestingly, this use of ceramic technology did not lead directly to its practical application, and it appears that after some 2,000-3,000 years the technology was lost. The earliest use of ceramic vessels appears to have been around 12500 B.C., in Japan.

Conservation Research - Research in this program pursues the identification and characterization of the chemical and physical processes involved in the deterioration of materials in museum collections (conservation science) and the development and evaluation of treatment techniques for unstable collection items (treatment technology). CAL's scientists and conservators address these questions in collaborative teams.

After the highly successful development of computer-based modeling techniques for the prediction of physical damages to traditional paintings resulting from changing environmental conditions (temperature, relative humidity) as well as mechanical forces (shock, vibration), this work has now been extended to investigate mechanical stability of paintings in modern media and three-dimensional objects. In a collaborative effort with the National Gallery of Art and the Canadian Conservation Institute, CAL staff participated in the organization and presentation of "Art in Transit," a series of nine workshops on the packing and transportation of paintings, held at various locations throughout the United States and Canada, for professionals from museums and the art transportation industry.

Results of the research on the optimal conditions for low-temperature storage of photographic materials, a major concern in archives and museums worldwide, has led to a drastic reevaluation of the existing recommendations for such storage conditions and revision of the American National Standards Institute (ANSI) standards. As a result, both construction and operation costs for such cold storage vaults may be significantly reduced. The work

continues to evaluate the merits and potential of alternative, low-cost technologies for low temperature storage.

Low-temperature storage also has been used for the preservation of modern polymeric and elastomeric materials, such as space suits and the rubber tires of historic aircraft. Research at CAL addressed concerns about the effects of crystallization phenomena in these materials, which could be expected to be especially complicated due to chemical changes resulting from oxidation over time. The results gave evidence that these effects can be reversed and do not necessarily constitute a cause for worry, provided that storage temperatures are set within certain specified ranges.

The research on natural and accelerated aging behavior of paper now combines and correlates studies of mechanical and chemical behavior, providing the basis from which to develop predictive models for the degradation of paper and cellulose.

Education and Training - The Furniture Conservation Training Program graduated its second class of students in FY 1993. CAL staff continued its involvement in the joint CAL - Johns Hopkins University graduate program in conservation science; two students in this program received Ph.D. degrees during FY 1993. In addition to the "Art in Transit" workshops referred to above, CAL staff organized and taught eight specialized conservation courses, including one specifically developed for restorers of historic musical string instruments.

In collaboration with the Smithsonian Institution Archives and Smithsonian Institution Libraries, CAL initiated a training program in conservation and preservation of archival collections. This program combines lectures, demonstrations, and on-site training of archival personnel in appropriate handling and management practices for archival collections with internship training of students in the conservation of archival materials. The training program in archaeological conservation continued into its second year; one postgraduate and one graduate student intern spent time on excavation projects in the Middle East and Central America. The Samuel H. Kress Foundation again provided funding assistance for their travel expenses. In total, CAL supported and hosted three postgraduate fellows, one pre-program intern, and nine summer interns.

CAL organized and co-sponsored a major international conservation conference of the International Council of Museums' (ICOM) Committee for Conservation in August 1993. More than 700 conservation professionals from all over the world attended this week-long meeting, during which they exchanged the latest technical information in the field. In collaboration with the Library of Congress and co-sponsorship with several other institutions, CAL also participated in the organization of an international conference on preventive conservation of collections in Latin America, attended by about 100 participants in August 1993.

Technical Information - In FY 1993, about 600 requests for information from the general public were answered by CAL's information specialists, scientists, and conservators. CAL's information program also handled about 110 requests for information assistance from

Smithsonian staff and another 240 from museum professionals nationwide. In addition, CAL's information specialists performed about 170 data-base searches for museum professionals inside and outside the Smithsonian on the Conservation Information Network of which CAL is a contributing partner. The number of reprints in CAL's collection of conservation literature grew by about 5,230 articles.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds, derived from the fees charged to participants in CAL's advanced conservation specialist courses, partially offset the expenses incurred in organizing these courses. Funds from the Smithsonian's Scholarly Studies Program and the Research Opportunities Fund are available to support research projects. In addition, an allotment is available to support the purchase of special laboratory equipment.

Restricted Funds - The Samuel H. Kress Foundation provided travel funds for interns participating in the archaeological conservation training program.

Museum Support Center

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	56	5,236	-	-	-	-	-	-	-	-
FY 1994 Estimate	56	5,303	-	-	-	-	-	-	-	-
FY 1995 Estimate	56	5,675		-	-	-	-	-	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Museum Support Center (MSC), located in Suitland, Maryland, is a specially equipped and environmentally controlled facility providing state-of-the-art technology for scientific research, conservation, and collections storage. MSC accommodates collections storage in four sections (or pods) for three general types of needs: collections storage in cabinets, "wet" collections storage on open shelving for biological collections in alcohol, and "high-bay" storage for very large objects. MSC also houses the Conservation Analytical Laboratory (CAL) and conservation laboratories for the National Museum of Natural History (NMNH) and the National Museum of American History (NMAH), the NMNH Laboratory for Molecular Systematics, and other NMNH specialized research laboratories. MSC's facilities provide the best conditions possible for preservation of the National Collections for future generations.

For FY 1995, the Institution requests an increase of $1,326,000 for Museum Support Center Move costs. The Institution requests that the funds for MSC collections storage equipment and MSC Move costs remain available until expended.

The MSC FY 1994 base includes an amount of $994,000 for the third annual payment to reimburse the permanent Judgment Fund of the U.S. Treasury in compliance with a vendor judgment relating to the purchase of storage equipment for the Museum Support Center facility. For FY 1995, $40,000 of this funding is needed to complete payment to the Judgment Fund. Therefore, the FY 1995 request reflects an offsetting reduction of $954,000 associated with this judgment.

PROGRAM - The Institution's Museum Support Center provides facilities for the conservation and preservation of museum objects, conservation training, scientific research, and storage of museum collections. New, specially designed, state-of-the-art storage equipment is now available at MSC to house more than 62 million objects and object parts.

The MSC Operational staff provides computer services for administrative, research and collections management data, to facilitate the transfer to MSC of the more than 62 million specimens and objects and their parts. The staff also meets the research and collection study needs of MSC occupants, provides shipping and receiving services, oversees safety and security operations, and maintains strict environmental and cleaning services required for the proper storage of museum collections.

The size and scope of the move of Smithsonian collections to the Museum Support Center, including the preparation and relocation of millions of objects and specimens from nine curatorial departments in two different museums, is unprecedented within the museum world. The volume, characteristics, and variety of the collections and the distance of the transfer pose special challenges that must be addressed as part of the move. MSC Move staff technicians inspect the objects for pests and conservation problems, clean them, and properly stabilize them prior to their move. Objects that have been contaminated by asbestos in storage areas receive additional treatment. The collections relocated to MSC are properly curated, less crowded, and housed in better-controlled environmental conditions than collections in most other Smithsonian storage areas. As a result, they have far better prospects for long-term preservation and will be significantly more accessible to researchers.

Early in its planning for the relocation of collections, the Smithsonian established the concept of the "Initial Move," with the objective being the phased transfer of designated objects from NMNH and NMAH to MSC over a multi-year period. These collections will occupy approximately two-thirds of the MSC storage space, and the remaining third will be used for "Growth." To date, the Smithsonian has focused on the Initial Move into the high-density storage equipment. During this time, however, many of the collections of the curatorial departments have continued to grow. As a result, the distinction between those collections and activities designated for the Initial Move and those collections targeted for the future Growth Move has blurred. The Institution is now by necessity conducting Growth Move activity prior to completing the Initial Move activity.

MSC Collections Storage Equipment - The General Services Administration (GSA) has awarded all reprocurement packages that provide the storage equipment required to relocate the Initial Move high-density collections to MSC. By July 30, 1993, the contractor had installed 2,697 shelving cabinets, 5,587 drawer cabinets, 833 insect cabinets, 668 botany cabinets, all of the cantilever and wide-span shelving, all of the compactor screens, 272 large cabinets, 8,133 shelves, 41,465 drawers, and 850 polyscreens. GSA completed manufacture and installation during 1993 of all high-density reprocurement storage equipment packages for the Initial Move.

The Institution is now designing and purchasing for installation the "high-bay" collections storage equipment for Pod 4 and procuring and installing a portion of the balance of the collections storage cabinets for Pods 2 and 4.

The design, purchase, and installation of the balance of the "wet" storage equipment for Pod 3 will be addressed in future years as funds are available.

MSC Move - The Smithsonian has made significant progress on the Move in the last year. During FY 1993, NMNH and NMAH continued to move collections to MSC, with assistance from the Move staff. NMAH moved 3,300 musical instruments, glass plate negatives, busts, homeopathic materials, and other objects. Approximately 37,500 objects from the North America collections and 200 objects from the Asian furniture collection were moved. More than 19.1 million paleobiology specimens also were relocated. Other collections moved included 27,130 insects, 14,000 mammals, 60,000 bird eggs and 4,300 bird nests. The mammal collections stored at the Smithsonian Institution Service Center were relocated to MSC during FY 1993. In addition, many collection objects already moved to MSC and stored in temporary locations were relocated to their final storage destination in the pods. The Smithsonian has placed emphasis on relocating collections from the North and West Attics of NMNH, in order to ensure that the Natural History Building's Major Capital Renewal (mechanical renovation) proceeds on schedule.

EXPLANATION OF PROGRAM INCREASE:

MSC Move (1,326,000) - A total increase of $1,326,000 is requested in FY 1995 to prepare and move collections to MSC. This increase is partially offset by a reduction associated with the reimbursement of the permanent Judgment Fund. The Institution will use $842,000 to hire additional move technicians and $484,000 to procure necessary contractual services, supplies, and equipment.

ARTS AND HUMANITIES

Assistant Secretary for the Arts and Humanities

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	32	2,351	8	810	-	45	1	105	-	-
FY 1994 Estimate	32	2,394	8	826	-	50	1	105	-	-
FY 1995 Estimate	32	2,394	8	826	-	50	1	105	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Office of the Assistant Secretary for the Arts and Humanities provides direction to bureau directors, support offices, and programs in the arts and humanities in developing, executing, and managing their individual missions. It oversees essential museum functions, such as collections management, exhibitions, education, and public programs. The Office provides leadership in ensuring equal employment opportunities and in achieving full physical and intellectual accessibility of programs and collections to a culturally diverse public. It participates in national and international endeavors and fosters cooperation with other institutions in the arts and humanities.

This line-item includes the National African American Museum Project; the Office of Museum Programs, which provides training, information, and professional services to the museum profession nationwide; and the American Studies Program, which conducts a graduate program in American culture, incorporating course work at the Smithsonian. As a result of the Institution's FY 1993 Restructuring Plan, the Joseph Henry Papers has been merged with the Smithsonian Institution Archives. In addition, the American Studies Program will be incorporated into the National Museum of American History at the beginning of FY 1994.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the Office of the Assistant Secretary for the Arts and Humanities.

PROGRAM:

I. Office of the Assistant Secretary for the Arts and Humanities - The Office of the Assistant Secretary for the Arts and Humanities (OASAH) works closely with museums,

educators, and special committees to improve outreach programs, serve broader audiences, and plan and monitor new initiatives. It encourages improvements in accessibility throughout the Institution and new techniques in presenting programming for the public. OASAH administers five major programs: the Accessibility Program, the Special Exhibition Fund, the Collections Acquisition Program, the Integrated Curriculum Development Project, and the Experimental Gallery.

Accessibility Program - The Accessibility Program works to ensure that visitors and staff with disabilities have full and equal access to the Smithsonian's programs, exhibitions, and facilities. The Program offers pan-Institutional training and technical assistance, reviews Smithsonian facility and exhibition design documents, and provides accessibility services to museum and Zoo visitors.

In FY 1993, the Program initiated a continuing education program on accessibility for Smithsonian staff, Washington metropolitan area museum professionals, and visitors. Lectures, workshops, and focus groups inform participants about current accessibility issues as well as motivate them to research and develop innovative design solutions. The Program collaborates extensively with museums and other organizations across the country to improve accommodations for people with disabilities.

Special Exhibition Fund - In 1984, the Board of Regents established the Special Exhibition Fund to supplement Federal appropriations for exhibitions resulting from scholarly research in the various scientific, humanistic, aesthetic, technical, or interdisciplinary fields represented throughout the Institution. The Fund encourages interdisciplinary projects, experimentation both in exhibition technique and in content, and evaluation of the public's response.

Collections Acquisition Program - In January 1978, the Board of Regents established a Trust-funded Acquisitions Program to supplement Federal acquisition monies, which were insufficient for museums to purchase important, but expensive, works of art. In recent years, the Program has broadened to include other types of collections and has encouraged acquisitions that represent diverse cultural perspectives.

Integrated Curriculum Development Project - The Smithsonian has continued to work with the Duke Ellington School for the Performing Arts and the Illinois Math and Sciences Academy to develop a curriculum that successfully combines the humanities, arts, and sciences. The curriculum is being piloted at both schools and will later be replicated on a national scale.

Experimental Gallery - The Experimental Gallery encourages innovation and risk taking in exhibit technique and style. It provides space for exhibit makers to create, innovate, explore, and experiment with the exhibition development process, audience access, exhibition context, and techniques and style, including design, material, and interpretive strategies. The Institution conducted an extensive evaluation of the Experimental Gallery during FY 1993; the results will be available in early FY 1994.

II. National African American Museum Project - The program and collections management plans as well as recommendations for acquisitions are under development and will be completed in 1993. During FY 1993, staff members continued to identify collaborators and resources and to expand lists of African American collections, professionals, and research efforts. They also began to define collaborative efforts with other institutions concerned with African American history and culture.

III. The Office of Museum Programs - The Office of Museum Programs (OMP) provides training, information, and professional support to museums nationally. In FY 1993, OMP trained more than 700 museum practitioners from the United States and abroad in all aspects of museum work. It expanded course offerings in its services to tribal communities, reaching more than 100 American Indians from cultural centers and tribal communities around the nation. The Office offered referral, registration, counseling, and career development services to more than 500 interns and developed new materials that allowed for broad, low-cost dissemination of its programs.

IV. American Studies Program - Through the American Studies Program, the Smithsonian sponsors a graduate program in American material culture in cooperation with various universities located in the Washington metropolitan area and in other cities. As a result of the Institution's Restructuring Plan implemented in FY 1993, the American Studies Program will be merged into the National Museum of American History.

NONAPPROPRIATED SOURCES OF FUNDING:

I. Office of the Assistant Secretary for the Arts and Humanities:

Unrestricted General and Special Purpose Funds - An annual allotment supports the salaries, benefits, and expenses of the Assistant Secretary, a special assistant, and a museum program specialist. A separate allotment provides partial support for various accessibility services for Smithsonian visitors. In addition, transfers of unrestricted general Trust funds support the Collections Acquisition Program, which facilitates the purchase of major acquisitions, and the Special Exhibition Fund, which provides partial funding for important and innovative exhibitions throughout the Institution.

Restricted Funds - During FY 1993, the Office received grants from the Rockefeller Foundation and the Pew Charitable Trust in support of the Experimental Gallery.

II. National African American Museum Project:

Unrestricted General and Special Purpose Funds - The Project receives an allotment to support salary costs of the assistant director.

III. Office of Museum Programs:

Unrestricted General and Special Purpose Funds - OMP receives an annual allotment to support travel and subsistence expenses of minority professionals attending OMP activities. OMP has two special purpose funds: one for training tuition and one for an audiovisual sales program, the proceeds of which offset expenses and fees. In addition, OMP has one Trust fund to support intern registration and administrative services.

IV. American Studies Program:

Unrestricted General and Special Purpose Funds - The American Studies Program received tuition reimbursement from cooperating universities, principally George Washington University and the University of Maryland, College Park, whose graduate students took courses offered by the American Studies Program. The tuition reimbursement refunded the Smithsonian Institution for the use of its facilities by the students participating in Smithsonian classes and, in addition, provided honoraria and reimbursement for the services of outside experts participating in the program.

National Air and Space Museum

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	231	11,731	2	213	-	4,344	-	1,721	-	443
FY 1994 Estimate	230	11,972	2	223	-	4,619	-	1,716	-	271
FY 1995 Estimate	230	11,972	2	223	-	4,619	-	1,716	-	271

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The mission of the National Air and Space Museum (NASM) is to memorialize the national development of aviation and space flight; collect, preserve, and display aeronautical and space flight equipment of historical interest and significance; serve as a repository for scientific equipment and data pertaining to the development of aviation and space flight; and provide educational material for the historical study of aviation and space flight. Within the broader mission, immediate goals are to explore and present the history, science, technology, and social impact of aeronautics and space flight and to investigate and exhibit the nature of the universe and the Earth's environment. NASM's current research, exhibitions, films, outreach, collections, and archival efforts are dedicated to these goals.

In addition to its Mall location, NASM maintains the Paul E. Garber Preservation, Restoration, and Storage Facility in Suitland, Maryland. The Institution has recently received Congressional authorization for planning and design of an extension facility at the Dulles International Airport to replace the Garber Facility. It will house the Museum's collections and its restoration and exhibit production facilities, enabling the Museum to properly care for its largest aircraft and spacecraft.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the National Air and Space Museum.

PROGRAM - The major programs of the National Air and Space Museum are collections development and management, preservation and restoration of artifacts, historical and scientific research, exhibitions, publications, and education and outreach activities.

Collections Development and Management - Major acquisitions in FY 1993 include the collections of General Benjamin O. Davis, Jr., and the late General Curtis E. LeMay, the aerobatics aircraft Extra 260, and the "Brilliant Pebble," a space-based interceptor from the Space Defense Initiative program.

NASM'S Archives responds to a high volume and wide variety of requests from individual aircraft enthusiasts, scholars researching major studies in aeronautical history, and educational and commercial organizations. In FY 1993, an archival acquisition policy was completed that will guide the Museum in its archival acquisitions and enable limited archival storage space to be used to the best advantage.

Preservation and Restoration - In FY 1993, the delicate Disney space station wheel from the 1950s was conserved for installation in the art gallery, and major support was given to the "Star Trek" exhibition. Restoration staff made significant progress on the treatment of the World War II Hawker-Hurricane fighter and the Enola Gay B-29 bomber. At Dulles, collections maintenance staff completed the preservation of the large C-130 and Constellation aircraft, preparing them for long-term outdoor storage. An ambitious radiation survey of artifacts containing Radium-226 was completed at the Garber Facility, and a detailed conservation assessment of the Facility is nearing completion. More than 20 engines were cleaned and rehoused as part of a summer engine preservation project involving several interns. Working with the Building Management Division, two detailed gallery cleaning guides were completed, ensuring that professional and regular care will be given to artifacts on exhibition. The automated Collections Information System is now available on-line in an improved, more user-friendly version, and a local area network now brings that system to users at the Garber Facility. To document the many collections care procedures and policies, a lengthy and valuable Collections Management Guide was written by the staff.

Research - In a program to investigate preplanetary material around stars, researchers in the Laboratory of Astrophysics have discovered new, naturally occurring masers in the disk around one young star and developed a new model for the region. Infrared spectroscopy was used to develop and implement a new technique for searching for possible giant planets around nearby stars.

Curators and historians in the Department of Space History are engaged in research and publication on a wide variety of topics concerning the history of rocketry and space flight, including manned space exploration.

As part of the Institution's Global Change Research Program, research in hyper- and semi-arid regions of the Earth includes studies of lacustrine deposits in the eastern Sahara, sand transport in the Western Desert of Egypt and the Mojave Desert in the southwestern United States, and spectral analysis of dune sand in the deserts of Africa. An investigation of the soils, vegetation, and morphologic relationships at Mpala Ranch in central Kenya is under way. Also relevant to global change are investigations to assess forest and soil damage due to air pollution in the Czech Republic and elsewhere in Central and Eastern Europe, the rate and extent of

deforestation in Madagascar, and forest loss in the Washington-Baltimore metropolitan area due to urban growth. A collaborative study with researchers in Brazil's Instituto Nacional de Pesquisas Espaciais to improve methods of assessing the rate of deforestation in the Amazon is planned for FY 1994.

The results of research at NASM are shared with the public through lectures and exhibitions and in family and school outreach activities. Staff members in the Aeronautics Department, for example, completed a series of lectures and films inspired by the new World War I gallery. The General Electric Aviation Lecture Series has had another very successful year.

Exhibitions - The Museum's major new exhibition "Where Next, Columbus?" examines prospects for space exploration during the next 500 years and the challenges human beings will have to face. Another exhibit opening in FY 1993 was "Blueprint for Space," examining the Collier's magazine series of articles, published in the 1950s, on manned spaceflight. A bust of Eugene Bullard, the first African American combat pilot, was added to the Museum's permanent exhibition on World War I, "Legend, Memory, and the Great War in the Air."

The first in a series of special exhibitions commemorating the 50th anniversary of World War II opened in FY 1993 featuring the P-47. "The Arado Ar 234 *Blitz*," the first jet reconnaissance and bomber aircraft, will be the second aircraft exhibited in this series. Early in FY 1994, "Monitoring the Amazonia from Space," an exhibit on how satellite images are used to monitor ecological changes in Amazonia, will open to the public. Later in FY 1994, the Museum will install the Extra 260 aerobatics aircraft, a recent gift to the collection, that was flown by the World Aerobatics Champion Patty Wagstaff. An exhibition by Mary Edna Fraser of silk batiks made from aerial photographs will also open in FY 1994.

Longer-term projects include an exhibition on the atomic bomb and the end of World War II; "How Things Fly," a hands-on exhibition on the scientific principles of flight; an exhibition on the Vietnam War; "Understanding the Universe," on cosmology; and "Divided Skies," on African Americans and their role in aviation.

Publications - In FY 1993, Legend, Memory, and the Great War in the Air was published to accompany the exhibition of the same name. This book was authored by four of the Museum's curators--Dominick Pisano, Thomas Dietz, Joanne Gernstein, and Karl Schneide. David DeVorkin saw the publication of his book Science with a Vengeance: How the Military Created the U.S. Space Sciences after World War II. In September 1993, To Fill the Skies with Pilots: The Civilian Pilot Training Program, 1939-46, written by Dominick Pisano, will be published. The children's book, Blue Planet, by Barbara Embury, an educational companion to NASM's IMAX film, was published in cooperation with the Smithsonian Institution Press. In the Smithsonian History of Aviation series, the Museum added The Great War in the Air: Military Aviation from 1909 to 1921 by John H. Morrow, Jr.; Carl A. Spaatz and the Air War in Europe by Richard G. Davis; and To Command the Skies by S. McFarland and W. P. Newton,

which was awarded the Aviation Writer's Association prize for the best nonfiction book of the year. This is the third consecutive year that a book published in this series has been so honored. The biography of physicist Lloyd Berkner has just been completed and published. Space Exploration and Discovery, by Martin Collins and Sylvia Kramer, will be published early in FY 1994.

Education and Outreach - Several new initiatives encourage a more diverse visitorship to the Museum and increase interest in public programs. NASM buses youngsters from the District of Columbia schools and from other school systems in the metropolitan area to the Museum for programs featuring African American astronauts or military and civilian aviators. The children are encouraged to look up to these men and women as role models. Family nights bring students, their families, and their teachers to the Museum after public hours for demonstrations, tours, short talks, and IMAX films. Teachers are given free curriculum materials from the Education Resource Center. African American students are being trained as explainers to carry out demonstrations in various galleries on the principles of aviation and space flight. These young people will gain insight into the way flying machines operate while building up self-confidence in making public presentations.

The Museum has recently forged a liaison with the American Association for the Advancement of Science and a group of distinguished black scientists and engineers in the D.C. area in a program known as SMART (an acronym for Science, Mathematics, Aeronautics, Research, and Technology). This liaison will provide a framework within which disadvantaged high school students can be guided by dedicated mentors toward science and technology careers. SMART provides featured speakers for programs in the Museum's planetarium and works with schools and churches to provide transportation for children and their families. Members of SMART serve as mentors for high school students interested in working in a real laboratory after school or in solving advanced computer problems. By working with SMART, the Museum hopes to channel high school students who serve in the Explainers Program to specialists who can give them hands-on experience working on technical problems.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds come from a variety of sources, including the Museum's share of net proceeds from the museum shops and restaurants and a share of the net proceeds from bureau activities, such as the theater and planetarium and program allotments. In addition to meeting expenses of the theater and planetarium and support costs of the director, these funds finance fellowships, research chairs, guest lectures, symposia, conferences, and special public events. A portion of the proceeds from the theater and planetarium support the production of new IMAX films, including Blue Planet, Destiny in Space, and Cosmic Voyage. The Museum also receives outside support for these films.

Restricted Funds - These funds are from restricted endowments that specify their use. The Lindbergh Chair of Aerospace History provides continuing support for distinguished scholars to study at the Museum, and the Ramsey Endowment provides for research relating to

naval flight history. Other fellowship programs including Guggenheim, Embry Riddle, and Martin Marietta internships, support pre- and postdoctoral students, multi-cultural students, and distinguished scholars in aviation and space science. Corporate donations, both monetary and in-kind, help NASM to support collections management, research, educational programs, exhibitions, publications, the Embry Riddle Internship Program, public science demonstrations, and the annual Exploring Space Lecture and the General Electric Aviation Lecture Series.

In partnership with the American Association for the Advancement of Sciences, NASM is a site in the National Science Foundation-funded Museum Equity Projection (Project MOSAIC). The purpose of the grant is to promote the creation of a diverse staff and to further equity goals in programs, exhibits, and training.

Federal Grants and Contracts - The National Aeronautics and Space Administration (NASA) is the primary source of Federal grants to NASM. Continued funding from NASA grant programs supports research activity in planetary geology by the Museum's Center for Earth and Planetary Studies, including photogeologic investigation of planetary tectonic features, the structural geology of the Basalt Plains of Washington State, the geographic mapping of Mars, and the Planetary Image Facility. NASA continues to partially fund a research project to study forest damage in Czechoslovakia due to the effects of air pollution. Geologic investigations in the Earth's drylands and global environmental change research are supported by Smithsonian Institution Scholarly Studies Program, a Becker Foundation grant, and a grant from NASA's Earth Sciences Program. A grant from the National Science Foundation supports undergraduate interns who wish to gain research experience by participating in ongoing geologic investigations at the Center for Earth and Planetary Studies.

NASA also sponsors a NASM staff member as a mission scientist on the European Space Agency Infrared Space Observatory. The Laboratory for Astrophysics continues to receive funding from NASA for ongoing research in infrared astronomy.

National Museum of American History

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	372	18,484	1	154	9	975	2	5,000	-	-
FY 1994 Estimate	367	18,261	1	184	9	975	2	5,000	-	-
FY 1995 Estimate	367	18,261	1	184	9	975	2	5,000	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The National Museum of American History (NMAH) is an educational institution dedicated to understanding the experiences and aspirations of all the American people. Through collections, research and publications, exhibitions, and an array of public programs, with a special emphasis on musical performance, the Museum preserves and interprets the national heritage for scholarly and general audiences. Its collections of artifacts, numbering in the millions, together with its extensive archival holdings and the National Numismatic collections, represent the social, cultural, scientific, and technological development of the United States, and constitute one of the most comprehensive history collections in the world. In all of its endeavors, NMAH makes a special effort to recognize the diverse aspects of American culture and to present that diverse culture to audiences on the Mall and far beyond.

The Museum of American History also administers the National Postal Museum. The National Postal Museum interprets, preserves, investigates, collects and promotes the personal and cultural heritage of the American people through original research, exhibits, public programs, and publications pertaining to postal history.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the National Museum of American History.

PROGRAM - The National Museum of American History is dedicated to increasing the understanding of American scientific, technological, social and cultural history through original research, publications, exhibitions, and public programs.

Exhibitions - In FY 1993, 11 exhibitions opened at the Museum. These exhibitions ranged from a small single case to 3,500-square-foot displays. Certainly the most compelling exhibition was "Personal Legacy: The Healing of a Nation." Marking the tenth anniversary of the Vietnam Veterans Memorial, this show includes 500 items from a collection of more than 25,000 objects deposited at the Memorial. The objects range from flags and memorial wreaths to dog tags, personal letters and stuffed toy animals. Another exhibition receiving wide acclaim was "Beyond Category: The Musical Genius of Duke Ellington." This show celebrates the achievements of one of America's greatest composers, musicians and innovators through displays of memorabilia, musical instruments, posters, original photographs, and musical manuscripts. The exhibit uses interactive videos of individual musicians from the Ellington Band, coupled with a large screen theatre featuring vintage film clips and interviews with contemporary jazz greats.

In FY 1994, the permanent exhibition "Science in American Life" will open for public viewing. This show will explore how chemistry and the physical and biological sciences have affected society and how society has influenced the pursuit of science. Staff are also planning for "The American Festival," an exhibition and public program traveling to Japan designed to provide Japanese citizens with a general introduction to the history and culture of the United States through the prism of diversity.

Now scheduled for FY 1995, the permanent exhibition "Land of Promise/Land of Paradox" will explore the dynamism of American life in the 19th century. It will highlight the experiences of African Americans, Cherokees, and Central and Eastern European Jews. In conjunction with the development of this exhibition, staff are conducting extensive research on industrialization and the labor movement, immigrant populations, African American communities (both free blacks and slaves), and westward expansion.

Research and Publications - Research activity in the Museum concentrated on the study of topics and artifacts related to major upcoming exhibitions, described above. In addition, this year the Museum co-sponsored a major international symposium on material culture. Publications arising from this and from a previous seminar will make important contributions to the understanding of material culture history. Other major publications are forthcoming on the following subjects: the history of medicine in the U.S. Navy, the dragster, the Tennessee-Tombigbee Waterway, agriculture in Virginia, political caricature, and Indian and African American foods and medicinal plants, to name a few. The Archives Center began a major research project on the history of commercially-created images of American ethnic groups.

Musical research led to three new documentary recordings and eighteen classical concerts of historical period interpretation by the scholar/ musicians comprising the Castle Trio, the Smithson String Quartet, and the Smithsonian Chamber Players. We'll Understand It Better By and By, a book dealing with pioneering African American gospel composers, was published by the Smithsonian Press. This is the first of a series entitled "Wade in the Water"

which will focus on African American sacred music traditions. Other products of this project will be a 26-part series for public radio as well as a compact disc set and traveling exhibition.

Public Programs - The highlight of FY 1993 was the opening of the Hands On History Room, a 3,000-square-foot space that provides more than 40 hands-on activities related to the Museum's exhibitions. The Room is enormously popular with visitors of all ages and is an integral part of the Museum's program to improve the visitor's learning experience on the exhibition floor.

At the same time, the Museum developed and presented more than 150 other exhibition-related free educational activities, publications, forums, performances, and special events to increase visitors' understanding of the American past. Many of these programs focused on the nation's Hispanic and Native American heritages, while another large group dealt with the music of Duke Ellington. One example was an exciting series on Native American traditions in New Mexico. This celebrated Native American Heritage Month in musical performances, craft demonstrations, and documentary films, in conjunction with the "American Encounters" exhibition.

The Museum also issued, in collaboration with Smithsonian Folkways, two recordings of the Hispanic and Native American music of New Mexico, and produced a festival featuring that music in Santa Fe, New Mexico, in collaboration with the Museum of New Mexico. The Jazz Masterworks Editions and Jazz Masterworks Orchestra programs, which combine research and performance, gave 11 free concerts at the Museum in addition to an appearance at the White House by special invitation.

Collections Acquisition - In FY 1993, the Museum received a number of significant objects through purchases and gifts. The computer collections were enriched through the acquisition of the world's most successful chip-making machine, the Applied Materials 5000; "David," the first portable computer designed specifically for blind users; and, original copies of the most popular word processor, Microsoft Word. An African American, split-oak cotton basket, long sought after for the agriculture collections, was acquired, as was a 1913 Brooklyn Dodgers uniform, the earliest professional sports uniform in the Museum. Seven hundred jazz films, one of the most complete collections known, enriched the Archives Center's holdings, along with the packaging design archive of Walter Landor. A fine turn-of-the-century silver tea service and working drawings by George C. Gebelien, a prominent figure in the arts & crafts movement in Boston, were added to the domestic life collections.

Collections Management - Planning continued for a modern, comprehensive collections information system (CIS) with the evaluation of database software and the implementation of the initial design phase. The Museum is seeking to replace its ten-year-old computer system and network in order to move forward with this project. With the new staff provided by Congress for collections accountability, the Museum will reduce documentation backlogs in collections related to community life, political history, armed forces history, and medical

sciences. The Museum also implemented its conservation-related exhibits maintenance program, with staff authorized by Congress in FY 1992.

In order to relieve collections stored in cramped and substandard spaces, collections management staff continued to relocate objects to the Museum Support Center. That space is now 20 percent occupied. Emptying and cleaning asbestos-contaminated Building 17 at Suitland will begin in FY 1994. Staff must relocate over 100,000 objects to accommodate this work. A tornado at Silver Hill in November, 1992 brought out teams of conservators and collections managers who are still providing emergency response to collections stored in two seriously damaged buildings.

The National Postal Museum - The National Postal Museum opened to the public on July 30, 1993. It is currently comprised of five permanent exhibitions: "Binding the Nation," which explores the growth of mail service in America during the 18th and 19th centuries; "Customers and Communities," which examines the challenge of delivering mail in cities and rural areas; "Moving the Mail," which documents the evolution of mail transportation and the impact of the postal system on the growth of America's commercial transportation systems; "The Art of Cards and Letters," which explores the enchantment and excitement of personalized communications, emphasizing the permanence of cards and letters; and "Stamps and Stories," which includes the history of postage stamps, the beauty and lore of philately, stamp production, and philatelic rarities.

During FY 1994, the Postal Museum will begin designing four additional galleries, plus a large-screen theater, in spaces adjacent to the current galleries. Two traveling exhibitions will be funded during FY 1994 with corporate and individual support.

Much of the Postal Museum's research activity complements the opening of its exhibitions. In addition to the preparation of exhibition scripts, a 223-page guide to the Museum, entitled Mail on the Move, was published in FY 1993. Another manuscript devoted to the history of postal architecture will be published in FY 1994.

In 1994, the Postal Museum will lift its temporary moratorium on major collecting activities. Staff will complete its work on rehousing the philatelic and postal history collections at the new site. Educational activities, special events, and performance activities begun in FY 1993 will continue.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - This funding is from various sources, including the Museum's share of museum shop, photo shop, and cafeteria sales; publication royalties; and various annual allotments. In FY 1994, these funds will support the salary and benefit costs for the position of museum director and the Museum's unique chamber music performance and recordings program.

Restricted Funds - The principal sources of income for these funds are individual or corporate gifts and foundation grants provided for specific purposes.

Gifts and grants are the major sources of funding for new exhibitions. Among the many notable contributions are the following. Major grants have been received from the American Chemical Society; Browning-Ferris Industries; the Computerworld Information Technology Awards Foundation, Inc.; and the Occidental Chemical Corporation to support a major exhibition and educational programs on "Science in American Life," scheduled to open in FY 1994. The Museum also plans to reinstall its Timekeeping Hall, with a generous gift from the Timex Corporation. The Chubb Corporation has made possible the construction of a new theatre in the "First Ladies" exhibition. And in FY 1993, the Smithsonian signed an agreement with the Media International Corporation to send a major traveling exhibition and performance program to Japan which will provide Japanese citizens with an introduction to the history and culture of the United States.

The United States Postal Service provides the principal source of funding for the National Postal Museum under the terms of its operating agreement. Major corporate gifts in FY 1993 from the National Grange; Hallmark, Inc.; Pitney Bowes; and the National Association of Letter Carriers also contributed to the development of exhibitions and paid other costs associated with the opening of the National Postal Museum.

National Museum of the American Indian

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	147	11,422	1	193	-	84	-	200	-	-
FY 1994 Estimate	177	11,502	1	201	-	84	-	200	-	-
FY 1995 Estimate	225	14,917	1	201	-	84	-	200	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The National Museum of the American Indian (NMAI), established in 1989 by Public Law 101-185, recognizes and affirms to Native communities and the non-Native public the historical and contemporary cultures and cultural achievements of the Native Peoples of the western hemisphere through development and use of its collections and nationwide public programming, research, and exhibitions executed in consultation with Native peoples. The mission of NMAI states that the Museum has a special responsibility, through innovative public programming, research, and collections, to protect, support, and enhance the development, maintenance, and perpetuation of Native American culture and community. NMAI operates planning and administrative offices in Washington, D.C., the former Museum of the American Indian at Audubon Terrace in New York City, and a Research Branch located in the Bronx, New York. This Research Branch houses curatorial offices, a conservation laboratory, and most of the Museum's one million objects. In 1994, a new exhibition center in New York City will open at the George Gustav Heye Center at the Alexander Hamilton U.S. Custom House. Future facilities will include a reference, collections, and program support center at Suitland, Maryland, and a museum building on the Mall. Additionally, NMAI will develop a nationwide program of training and outreach services for Native communities in consultation with Native Americans.

For FY 1995 NMAI requests an increase of 48 workyears and $3,068,000 for communications and facilities support (15 workyears and $578,000), program and administration support (10 workyears and $1,150,000), and Custom House Security (23 workyears and $1,340,000). Justified in the Mandatory Costs Increases section of this budget is $497,000 to annualize the partial-year funding appropriated in FY 1993 for utilities and maintenance costs

at the NMAI New York facilities. These increases are partially offset by a reduction of $150,000 associated with one time equipment costs at the Custom House.

PROGRAM - The Museum of the American Indian, located in New York City, opened its doors to the public in 1922. On June 24, 1990, the collection was transferred to the Smithsonian Institution to form the base of the National Museum of the American Indian. The collection, which was initiated near the turn of the century, is one of the world's richest assemblages of artifacts of the indigenous cultures of the western hemisphere. In collaboration with Native Americans, the new Museum will advance knowledge and understanding of these cultures, including their art, history, and languages. Through innovative public programming, research, and collections management, the Museum will recognize its special responsibility to protect, support, and enhance the development and perpetuation of Native cultures and communities.

Facilities Planning - The renovation of the George Gustav Heye Center in New York is scheduled for completion in April 1994. Staff will move in during the summer of 1994 to prepare for the public opening in the fall. The architectural consultants for the Cultural Resources Center have completed the conceptual design of the collections facility to be located in Suitland, Maryland. The design phase is scheduled for completion in 1994. The architect for the Mall Museum has been selected and contract negotiations for facility design services have begun.

Exhibitions and Public Programs - In November 1992, NMAI opened its special exhibition, "Pathways of Tradition," in the rotunda of the Alexander Hamilton U.S. Custom House as a prelude to the 1994 grand opening of the George Gustav Heye Center. The exhibition, made possible with funding provided for this purpose in FY 1992, presented objects selected by Native Americans coupled with first-person commentary. During its two and one-half months it provided the museum both educational and fund-raising opportunities. The exhibition drew nearly 40,000 visitors to NMAI's new location.

Design and production of the four 1994 opening exhibitions at the George Gustav Heye Center are continuing through FY 1993. "All Roads Are Good" will represent the breadth of the collection through objects selected by 28 Native Americans that offer multiple perspectives. Issues surrounding the relationship of contemporary Native American artists to their traditional past will be explored in "Celebrations," in which 16 Native American artists, each specializing in a different art form, are collaborating on a single installation. The third exhibition, the working title of which is "Living Treasures," will present a survey of the NMAI's collection based upon its most significant cultural materials. The final exhibition will orient the visitor to the Native American history of the lower Manhattan area and the history and architecture of the Custom House. The staff is also continuing to plan the public programs that will accompany these inaugural exhibitions and the exhibitions that will follow.

For "Pathways of Tradition," the staff scheduled an Indian Dance Festival and collected articles on Native American dance, which were published in a book entitled Native American

Dance in the fall of 1992. Other publications under development include a book highlighting NMAI collections and catalogues for opening exhibitions.

Outreach Services - NMAI's primary emphasis in outreach in FY 1993 continues to be building staff capacity to broaden services. After a nationwide search, the Museum filled the vital position of assistant director for public programs with a Native American who has two decades of experience in exhibitions, writing, and management of Native American cultural centers and museums. The Museum hired a field consultation assistant who coordinates regional and focus-group consultations. The Museum also sponsored regional training workshops for Native Americans coordinated by the Smithsonian's Office of Museum Programs.

Development of training and other outreach services remains a high priority goal for FY 1993. As part of its training mission, NMAI is sponsoring a summer institute during which, in a two-week seminar, Native Americans who work in cultural institutions and programs will be exposed to a vast array of methods, resources, and issues related to the operations and development of museums and museum programming. A discussion with representatives of several Latin American nations in July 1992 helped advance plans for international programs based on NMAI collections and programs.

Collections Management and Access - In FY 1992, the Institution opened a conservation laboratory in the 3,000 square foot annex to the New York Research Branch. These facilities and the addition of two conservators will help serve urgent collection needs. This supported preparations for the "Pathways of Tradition" exhibit in 1992 and will support preparations for the 1994 exhibitions. They will also provide collections photography for related publications and assist in planning for the relocation of collections from the Audubon Terrace facility to the Research Branch in FY 1993. The curatorial staff worked with NMAI Board committees and outside specialists to develop a comprehensive collections policy, approved by the board in the fall of 1992. Individual collections research projects are proceeding on Navajo textiles, the documentation of the Apache collections, and a database for NMAI's more than 100,000 photographs.

In FY 1993, the Museum expanded its repatriation program. Program staff will produce tribally specific inventories and documentation on objects requested for repatriation. The office will lead in nationwide repatriation activities and policy development. To date, research and negotiations resulted in substantial progress on an important repatriation request from Alert Bay-Cape Mudge, British Columbia.

The Museum hired additional collections management staff in FY 1993 to consolidate the New York collections at the Research Branch and prepare them for relocation to the Washington facilities. Because of the severe overcrowding of staff and collections, NMAI will acquire and outfit several modular offices at the Research Branch to permit the work of collections management programs to proceed.

Administration - The administrative staff is providing management support for the Museum's programs through reporting and tracking systems that monitor resource activities.

The personnel hiring goals for FY 1993 have been met, and the administrative staff is now projecting staffing requirements to meet the needs of program activities. A careful review of all anticipated staffing needs from the present to the year 2001 is also under way to forecast the full level of staff resources needed to operate the Museum at full capacity at three sites.

The Museum is also developing and implementing a project management system to plan for and track financial and staff resource allocation among all the many major far-reaching projects inherent in the development and operation of this Museum. Projects being tracked include development and installation of each exhibit needed for the opening of the Custom House; staging of the relocation of staff to the Custom House and the collections from Audubon Terrace to the New York Research branch; and development and review of architectural plans for the Suitland and Mall facilities. Data derived from this system will be available to key offices throughout the Institution as well.

Detailed plans for the operation of the facilities at the Custom House, Suitland, and the Mall are currently being developed and refined. The goal is to provide accurate and timely projections of resources needed, both financial and staff, to operate the programs of the Museum at full capacity.

National Campaign - The National Campaign is making significant progress toward its goal of raising one-third of the construction costs of the National Museum of the American Indian Mall facility in Washington, D.C. As of September 1, 1993, the Campaign has generated more than $10.7 million. Of that total figure, more than $8.2 million is dedicated to the construction fund.

The Campaign continues to solicit major corporate, foundation, and individual donors. In May 1993, the Ford Foundation awarded a grant of $1.15 million to the National Campaign. The Ford Foundation grant, the largest foundation grant that the Campaign has received to date, will be used to support the "Fourth Museum" concept, linking the Museum's programs to tribal communities throughout the western hemisphere via telecommunications and special services.

A nationwide membership program, designed to build a broad-based constituency for long-term support of the Museum, has enrolled more than 68,000 members, with an initial renewal rate of over 60 percent.

In May 1993, under the Campaign's direction, a panel of jurors chaired by Senator Ben Nighthorse Campbell completed the judging phase of "Timecatcher, a Children's Art Project," a nationwide art contest that involved hundreds of fourth-, fifth-, and sixth-grade students from Bureau of Indian Affairs schools. Student winners will receive a trip to Washington, D.C. and

college scholarships, and the award-winning artwork will be used in the Campaign's solicitation of major donors.

The Campaign continues to raise funds through special events. In May 1993, the Campaign hosted a membership preview and formal dinner for members of the International Founders Council, a volunteer leadership group, in conjunction with the opening of "Shared Visions: Native American Painters and Sculptors in the Twentieth Century" at the Smithsonian's S. Dillon Ripley Center. During May through July, other events took place in Albuquerque, Santa Fe, and Aspen.

The Campaign managed the production of a 12-minute video presentation, an educational tool for prospective donors, which won first place in an American Association of Museums film competition. Other communications materials, including public service announcements for television and print advertisements, are in the final stages of production.

Turner Broadcasting Systems (TBS), Inc. will work with NMAI and the National Campaign on the production of television announcements, distribution of materials about the Museum, and special events such as film screening in connection with the TBS major broadcasting and publishing endeavor, The Native American: Behind the Legends, Beyond the Myths, which will begin in fall 1993. Components include an original six-hour documentary, several feature films, an illustrated book, and a series of in-depth news reports.

EXPLANATION OF PROGRAM INCREASE:

Communications and Facilities Support (15 workyears and $578,000): These dollars and positions are needed to equip and staff two important facets of the George Gustav Heye Center in New York City: the network communications control center and the cleaning and general maintenance of the facility, and a project manager for the developmental phases of the Suitland facility.

Program and Administrative Support (10 workyears and $1,150,000): These dollars and positions are necessary for staffing and support of public programs, the NMAI collection, and administration.

Custom House Security (23 workyears and $1,340,000): These dollars and positions are required to provide security (24-hour/seven days per week) to the NMAI collections as well as staff and visitors of the George Gustav Heye Center located in the U.S. Custom House.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - The Smithsonian has established allotments to cover salary and support costs for the NMAI director and the Trust portion of the National Campaign costs, including two positions' salaries and support costs. In addition, the Institution established an unrestricted special purpose account to receive income from the

National Museum of the American Indian's Campaign, which began in January, 1991. The NMAI currently receives income from museum shop sales, admissions, and donations. Investment income is available from the permanent endowment of the Heye Foundation, which was included in the property transfer.

National Museum of American Art

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	129	7,690	1	189	-	666	-	1,564	-	-
FY 1994 Estimate	127	7,777	1	177	-	813	-	1,286	-	-
FY 1995 Estimate	127	7,777	1	177	-	813	-	1,286	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The National Museum of American Art (NMAA) is the Nation's museum dedicated to the arts and artists of the United States from the earliest colonial times to the present. The Museum's principal goal is to promote art as a source of enrichment for the layperson and scholar alike and to serve as a resource in the broadest possible sense for American visual arts. The Museum serves audiences throughout the country as well as those who visit its two historic landmark buildings in Washington, D.C. Outreach takes the form of circulating exhibitions, educational materials, publications, and automated research resources that reflect the diversity of the country's citizenry and art.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the National Museum of American Art.

PROGRAM - The National Museum of American Art seeks to stimulate an understanding of American visual expression in its broadest contexts through national outreach and education as well as interpretive exhibitions, collections, publications, and research. As a national institution, the NMAA seeks to explore and serve the uniquely diverse national artistic heritage of the United States.

National Outreach and Education - The Museum's largest outreach project, Save Outdoor Sculpture!, continued during FY 1993 with ongoing surveys of sculpture in 43 states and the District of Columbia. A 30-minute video featuring innovative programs in Boston, Chicago, Dallas, Seattle, and Upland, California, was produced to highlight successful community strategies for caring for outdoor sculpture. By national announcement to more than

1,500 libraries and universities, the Inventory of American Sculpture was opened for public inquiry by mail or computer.

The Museum began a national Arts and Humanities Education Program intended to distribute educational materials to secondary schools across the country. This program will expand students' awareness of their cultural heritage as represented in the visual arts. Two videotapes with printed teacher materials are currently in production on African American artists and public sculpture.

Programs for diverse local audiences have been very successful. A street festival held in conjunction with an exhibition of the work of Romare Bearden drew 3,500 participants, and the Chinese New Year Celebration drew more than 4,000 visitors. The artwork of five high school Presidential Scholars was exhibited at NMAA, and an afternoon of presentations and readings hosted at the Museum in conjunction with this exhibition was attended by more than 400 national winners in art-related categories.

Exhibitions - Among the 15 exhibitions on view during FY 1993 at the Museum and its Renwick Gallery, several drew considerable attention. The highlight was "American Art at the 1893 World's Fair," co-organized with the National Portrait Gallery, which presented 100 paintings and sculptures by American artists shown at the fair. "American Impressions: Masterworks from American Art Forum Collections, 1875-1935" was selected from the impressive holdings of the Museum's supporting patrons group. "American Wicker" presented the first museum show ever to feature this very popular art form, here given extensive social and historical background. Different aspects of art from the Southwest were featured in "The Arvin Gottlieb Collection: Paintings from the American Southwest," "Pueblo Indian Watercolors," and "Prints and Drawings from New Mexico," all drawn from the Museum's permanent collection. The first major retrospective of abstract painter Jacob Kainen will open in September 1993.

The Museum also updated the folk art displayed on the first floor and pushed forward with plans to reinstall the 19th-century permanent collection galleries. Projected exhibitions under development for FY 1994 include a major retrospective of the paintings of Thomas Cole, panoramic cityscapes by Mark Klett, and paintings by Jasper Johns.

Collections - The Museum's collection of more than 36,500 objects encompasses painting, sculpture, graphic art, photography, and folk art, as well as modern crafts at its Renwick Gallery. In FY 1993, the Museum acquired a number of new works, including Summer (1909) by Max Weber, a rare early work in the artist's career. Major 19th-century paintings by Frederick Arthur Bridgman and Thomas LeClear and a fine bronze by Frederick MacMonnies were also purchased for the collection. A major painting by Philip Guston and a group of 22 works from the Taos and Santa Fe school, which strengthen 20th-century holdings, were received by bequest. A rare early portfolio of prints by Ansel Adams was acquired for the photography collection, and works by Felipe Archuleta, Hawkins Bolden, Lonnie Holley, Alexander Maldonado, and many others were added to the folk art collection. The Renwick's

collection was enhanced by the addition of an ebony rocking chair by Sam Maloof, vase by Fritz Dreisbach, and a walnut coffee table by Wendell Castle.

Publications - NMAA's scholarly journal American Art was accepted into the prestigious American Institute of Graphic Arts awards show and received an Art Director's Club Merit Award in 1993. Between Home and Heaven: Contemporary American Landscape Photography was chosen by the jury of the International Research for Image Selection in France as one of 1992's premier photography books. The books Revisiting the White City: American Art at the 1893 World's Fair, American Wicker, and Jacob Kainen were produced and published by NMAA in 1993 to accompany exhibitions bearing those titles. A book of 350 portraits of American artists from NMAA's Juley Collection will be published shortly. A daybook of images from the collections of American Art Forum members was also published in 1993. Future projects include Thomas Cole: Landscape into History and a photography book series entitled American Scene.

Research - In FY 1993, the Museum's fellowship program hosted a Regents fellow, Dr. Gabriel Weisberg from the University of Minnesota, eleven pre- and post-doctoral fellows, and eight visiting scholars from across the United States and abroad. Now in its sixth year, the Eldredge Prize for outstanding scholarship in the field of American art was awarded to Erika Doss for her book, Benton, Pollock, and the Politics of Modernism. The intern program sponsored 29 graduate and undergraduate students during FY 1993. Scholarship in the field of American crafts was given increased visibility through the establishment in FY 1993 of the Patricia and Phillip Frost Prize, which is a biennial, peer-judged award given by the Renwick Gallery.

The library, shared with the National Portrait Gallery, received a major collection of more than 415 art history books from William McNaught and 275 titles formerly in the collection of Walter Pach. A microfiche collection of 1.6 million photographs of artworks was purchased from the Courtauld Institute and another 10,000 images from the Peter A. Juley and Son Collection were added to the photographic archives.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - An annual allotment supports the cost of the director's salary, and the Museum receives a share of museum shop sales. The Museum's Exhibition Sharing Fund, which generates income through fees charged to borrowers of NMAA's touring exhibitions, financed the 1993 tours of five exhibitions to nine locations. Royalty income from museum publications was used to partially underwrite the costs of scholarly catalogues and to begin development of multi-media products. The Smithsonian Institution's Special Exhibition Fund supported the "1893 World's Fair" and "Romare Bearden" exhibitions and planning for several future exhibitions. A grant from the Smithsonian Women's Committee funded the purchase of the Witt Library photoarchive microfiche collection.

Restricted Funds - Private support of NMAA programs, especially exhibitions and publications, is critical to accomplishing the Museum's goals. In FY 1993, gifts from numerous individuals and corporations provided funding for the "American Impressions," "American Wicker," "Jacob Kainen," and "1893 World's Fair" exhibitions. Max Weber's Summer was purchased partially with funds from the Museum's Denghausen endowment fund. A multi-year gift from NYNEX continued to underwrite the "Thomas Cole" exhibition planned to open in February 1994.

National Portrait Gallery

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	90	4,996	-	5	-	107	-	320	-	-
FY 1994 Estimate	90	5,028	-	5	-	111	-	400	-	-
FY 1995 Estimate	90	5,028	-	5	-	111	-	400	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The National Portrait Gallery (NPG) is dedicated to the exhibition and study of portraits of people who have made significant contributions to American history and culture and to the study of the artists who created such portraiture. The Gallery sponsors a variety of scholarly and public activities for audiences interested in American art and American history.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the National Portrait Gallery.

PROGRAM - The National Portrait Gallery explores the heritage and accomplishments of the American people by collecting, researching, and exhibiting portraits in all media as both historical and artistic documents.

Collections Acquisition - In FY 1993, the Gallery received a portrait of Arthur Ashe painted by Louis Briel just before Ashe's death, a gift from the Commonwealth of Virginia and Virginia Heroes, Inc. Other gifts included portraits of Senator J. William Fulbright by Greta Bader and General Jonathan Mayhew Wainwright by Antonin Sterba. Purchases included paintings of Paul Laurence Dunbar, Joseph Jefferson, Rabbi Samuel Isaacs, and Eliot Porter (by Fairfield Porter).

Major purchases by the Department of Prints and Photographs include the 1710 mezzotint of Iroquois chief Tee Yee Neen Ho Ga Row; Marius De Zayas's charcoal drawing of electrical inventor Nikola Tesla; Amos Doolittle's 1791 political print of George Washington entitled "Display of the United States of America"; and ten caricature portraits by Paolo

Garretto. Gifts to the Department include a charcoal drawing of Paul Haviland by Marius De Zayas and a large group of works by the caricaturist Al Frueh. Through the generosity of Robert L. McNeil, Jr., the Gallery purchased a newly discovered, unique 1778 mezzotint of George Washington by Charles Willson Peale. A generous grant by the James Smithson Society enabled the purchase of Red Grooms's witty and evocative paper sculpture of painter Willem De Kooning, entitled "De Kooning Breaks Through," and a rare theatrical mask of Myrna Loy by W. T. Benda.

NPG acquired photographic portraits of Native American potters Maria and Julian Martinez. Other acquisitions include photographic portraits of Lorraine Hansberry, James Meredith, Willie Mays, Mary McCarthy, and James Thrall Soby and self-portraits by photographer Imogen Cunningham, Ralph Steiner, Lotte Jacobi, Beaumont Newhall, Richard Avedon, and a 16-part polaroid by Chuck Close. Other purchases include photographs of Sylvia Beach by Berenice Abbott, Frank Sinatra by Weegee, Bobby Jones by Harold Edgerton, Marcus Garvey by James VanDerZee, and a Langenheim daguerreotype of Henry Clay.

Collections Management - During FY 1993, temporary loans were made to 17 borrowers of 82 objects. The project to capture the original documentation related to collections is under way, with calendar years 1988-92 completed.

Research - The Catalog of American Portraits (CAP) has continued its National Portrait Survey, cataloguing portraits in public and private collections in the State of Arkansas as well as such major collections as the Art Institute of Chicago, the Cincinnati Art Museum and Historical Society, the Whitney Museum of American Art, the Museum of American Folk Art, the Metropolitan Opera, the Brook and the University Club in New York City, Hampton National Historic Site in Maryland, and the Phillips Collection in Washington, D.C. With a grant from the James Smithson Society, the CAP completed its survey of portraits in the State of Hawaii.

During FY 1993, a new Collections Information System was installed in the Gallery, the start of a planned four-year implementation process that will provide on-line access to object information and images to every NPG department. The Portrait Gallery is the first bureau to move its collections data to a local area network-based system to allow users access to images and curatorial, location, and research information about each object.

Research for an exhibition on presidential portrait gifts, to open December 1993, and for an exhibition on American journalism during World War II, to open in 1994, was essentially completed, and manuscripts for catalogues were sent to the publishers. The staff has commenced work on an exhibition to commemorate the 150th anniversary of the founding of the Smithsonian Institution and on a history of the first 30 years of the National Portrait Gallery. Research on "Celebrity Caricature in America" continues with the support of a grant from the Scholarly Studies Program and a travel grant from the Research Opportunities Fund.

The Gallery's Peale Family Papers project completed research on volume 4 of Selected Papers and has begun research for Charles Willson Peale's autobiography (volume 5). The staff continues research for the catalogue raisonne of Rembrandt Peale's work.

Exhibitions - "In Pursuit of Fame: Rembrandt Peale, 1778-1860," a major exhibition on the life and art of the American portraitist Rembrandt Peale, opened on November 6, 1992, and closed on February 22, 1993. A substantial grant from the Walter I. Annenberg Foundation underwrote part of the expenses of the exhibition and catalogue.

"The Telling Image: Portrait Photographs from the Archives of American Art" and "The Family 1976: Richard Avedon's Portraits for Rolling Stone," two exhibitions that explored the photographic medium from very different perspectives, were presented simultaneously. "American Art at the 1893 World's Fair" celebrated the 100th anniversary of the World's Columbian Exposition in Chicago--a watershed event in redefining attitudes toward the arts in the United States. Featuring 100 works borrowed from collections in this country and abroad, this exhibition was co-organized with the National Museum of American Art. NPG also showed portraits by Washington artist Marcella Comes Winslow in "Brushes with the Literary" and a collection of self-portraits made in the 1970s and 1980s, owned by the Washington historian James Goode.

"Arnold Newman's Americans" travelled to the Detroit Institute of Arts in Michigan, the Lyndon Baines Johnson Library and Museum in Texas, and the Columbus Museum of Art in Georgia. In FY 1994, the exhibition will travel to the Worcester Art Museum in Massachusetts and the Greenville County Museum of Art in South Carolina.

Gallery staff concentrated efforts on reinstalling that part of the permanent collection devoted to the 20th century. New rooms now focus on the Twenties, the New Deal, World War II, Exploration and Discovery, and the Civil Rights movement.

Publications - The exhibition catalogue, In Pursuit of Fame: Rembrandt Peale, 1778-1860, was published in cooperation with the University of Washington Press. Revisiting the White City: American Art at the 1893 World's Fair, a quincentenary publication co-created with the National Museum of American Art, was published by the University Press of New England and supported by the Elizabeth F. Cheney Foundation. The Portrait in Eighteenth Century America was published for NPG by the University of Delaware Press.

Education - The Education Department interprets the Gallery's collections for its visitors through daily tours, elementary and secondary school programs, senior citizen outreach, "Cultures in Motion: Portraits in American Diversity" programs, and family photograph and art workshops. The Department continues to conduct ongoing meetings with the District of Columbia art institutions, such as the D.C. Commission on the Arts and Humanities, to seek joint funding for collaborative outreach programs.

In FY 1993, the most notable "Cultures in Motion" public programs included "A Conversation with Thomas Jefferson and His Slave, Betty Hemings," "Happy Birthday, Dear Todd" (for Todd Duncan's 90th birthday), "Women at an Exposition," and "Coming into Passion: Song for a Sansei." The film series continues to commemorate the achievements of diverse cultures that make up America and to expand on portraits in the permanent collection and special exhibitions.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Various sources, which include the Gallery's share of sales in the museum shop, sales of photographic reproductions of collection objects and publications, and fees from museums to which NPG loans objects, provide these funds. These funds help defray the costs of publications, public lectures, symposia, and special events for exhibition openings, loan exhibition development and management, and research.

Restricted Funds - Designated for specific purposes, these funds are in the form of gifts and grants from individuals, foundations, organizations, and corporations. In addition to the grants from the Smithson Society and the Walter I. Annenberg Foundation that are detailed above, Robert L. McNeil made a generous contribution in support of the acquisition of a 1778 portrait mezzotint of George Washington by Charles Willson Peale. An anonymous donor made a contribution in support of the acquisition of the photographic portrait of Wallace Stegner by Marilyn Sanders. The Gallery also received gifts from a number of individual donors as well as substantial contributions for future activities and general support from the University of Maryland and the Institute for Advanced Computer Studies.

Hirshhorn Museum and Sculpture Garden

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	77	4,094	1	212	-	455	-	2,100	-	-
FY 1994 Estimate	77	4,103	1	214	-	455	-	2,100	-	-
FY 1995 Estimate	77	4,103	1	214	-	455	-	2,100	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - Public Law 89-788, signed on November 7, 1966, established the Hirshhorn Museum and Sculpture Garden (HMSG) as the Smithsonian's museum of modern and contemporary art. While the nucleus of the collection remains Joseph Hirshhorn's original gift, it has been greatly enriched by additional gifts from Mr. Hirshhorn and the 1981 bequest of the art he had collected since 1966. Other benefactors, such as collectors and artists, continue to give works to the Museum. Purchases made from funds provided by Federal appropriations, the Smithsonian's Board of Regents, Mr. Hirshhorn, private donors, and sales from the permanent collection have broadened the scope of the collection and maintained its contemporary character. The collection is the basis of an active program of exhibitions. The Museum staff conducts extensive research, prepares catalogues, and offers a variety of educational activities.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the Hirshhorn Museum and Sculpture Garden.

PROGRAM - In keeping with its status as a museum of modern and contemporary art, the Hirshhorn Museum and Sculpture Garden conducts programs of research, exhibitions, collections management, acquisitions, deaccessions, and educational activities involving audiences of all ages. After nearly one year of construction, the Hirshhorn plaza reopened in late fall 1992. This reopening initiated a return to previous visitation levels, which, at nearly one million visitors a year, make the Hirshhorn one of the most heavily visited contemporary art museums in the United States.

Research - The Museum's resources include more than 12,500 works of art, a curatorial file providing information on artists and works in the collection, and a library with 36,000 books and exhibition catalogues. The staff conducts research related to the presentation and conservation of its collection and in preparation for future loan exhibitions. Researchers and students can study works of art not on display, and a new computerized data base will ultimately allow staff and outside researchers to have access to documentary information concerning the collection.

Exhibitions - The Museum's active exhibition program draws increasingly upon its collection, in addition to special shows. During FY 1992-FY 1993, the Museum conducted a major reinstallation of its collection under the title "The Collection Reviewed." This exhibition involved the reinstallation of the third-floor and lower-level galleries, as well as the outdoor plaza and elements of the sculpture garden. This process of reinstallation will continue in FY 1994. In addition, a grant from the Smithsonian's Special Exhibition Program will allow the Museum to originate a series of new and innovative programs that will focus on the collection.

Three major exhibitions are planned for FY 1993-FY 1994: "Willem de Kooning from the Hirshhorn Museum Collections," an exhibition organized by the Hirshhorn that will travel to Barcelona, Atlanta, Houston, and Boston; "Gary Hill," an exhibition devoted to a leading American video artist originated by the Henry Art Gallery at the University of Washington in Seattle; and "Felix Gonzalez-Torres," an exhibition co-organized by the Hirshhorn in conjunction with the Museum of Contemporary Art, Los Angeles, and the Renaissance Society of the University of Chicago. The Museum also presents an ongoing series of "Directions" shows, a progression of one-gallery exhibitions of works by emerging artists and solo exhibitions of specific bodies of work by better-known artists. In FY 1993-FY 1994, this series will feature Glenn Ligon, Sue Coe, and Jeanne Dunning.

Acquisitions - The Hirshhorn continues to have a dynamic and highly respected acquisition program in modern and contemporary art. In FY 1992-FY 1993, the Museum purchased the following works with nonappropriated Trust funds: Brice Marden's Cold Mountain 2 (1989-91); Lucian Freud's Nude with Leg Up (1992); and Bruce Nauman's From Hand to Mouth (1967). Federally appropriated funds were used to acquire Richard Serra's Morro Bay (1992), Glenn Ligon's Black Like Me #2 (1992), and Ed Paschke's Fifi (1973).

A bequest to the Museum during FY 1992-FY 1993 included two works by Philip Guston--Day Dreams (1970) and Untitled (1971)--and gifts of two works by Alfred Leslie, both titled Study for "The Loading Pier" (ca. 1972).

Educational Programming - To increase visitor appreciation and understanding of specific exhibitions and of modern and contemporary art in general, the Museum produces a variety of educational materials, including catalogues, wall labels, and brochures. The Museum has begun to use annotated labels to describe selected works in the permanent collection more fully. A grant from the Smithsonian's Special Exhibition Program will enable the staff to experiment further with the use of descriptive wall texts and labels in a series of special

installations designed to teach visitors how to look at works from the HMSG permanent collection in the context of materials and documents from other Smithsonian collections. This grant will also enable HMSG to produce a free family guide to the Museum's collection so it can reach a more diverse audience.

Several new family-oriented activities were offered for the first time in FY 1993. These weekend workshops were free and attracted many multi-cultural and multi-generational participants. "Dancing with Dubuffet," performed by the all-teenage Amherst Ballet Theater Company and funded by the Special Exhibition Program, was especially popular, drawing three capacity audiences in June. Other Hirshhorn auditorium events in FY 1993 included several "FOCUS" talks by artists and curators of current exhibitions, concerts by the 20th Century Consort, film programs, and lectures by artists, critics, and art historians. The auditorium is extensively used for both Hirshhorn-originated and other programs.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds are provided from several sources, including the Museum's share of sales in the museum shop and various annual allotments. These funds support the salary, benefits, and travel costs for the Museum director, trustee travel expenses, and various special events.

Restricted Funds - HMSG has four endowment funds. The first fund derives from the $1 million Mr. Hirshhorn pledged at the signing of the initial agreement, and the second comes from the monies left to the Museum in his will. The third endowment comes from the sales of works of art. Finally, the Museum has received funds from the Holenia Trust, a Swiss foundation established by Mr. Hirshhorn. The Museum can currently use these four funds only to purchase works of art. At the beginning of each year, the Museum's Board of Trustees has authorized 10 percent of the value of the endowment funds for use as a purchase fund for the current year.

Arthur M. Sackler Gallery/Freer Gallery of Art

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	77	5,186	-	-	2	254	-	4,605	-	-
FY 1994 Estimate	77	5,249	-	-	2	254	-	3,429	-	-
FY 1995 Estimate	77	5,249	-	-	2	254	-	3,429	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Arthur M. Sackler Gallery, established in 1982, and the Freer Gallery of Art, established in 1906 as the Smithsonian Institution's first art museum, are the American national museums of Asian arts. Both actively seek to stimulate interest in and increase knowledge about the artistic and cultural traditions of Asia through exhibitions, public programs, research, publications, collections management, and acquisitions. The Freer Gallery also contains a collection of American art by artists whose work was influenced by Asian art. While the Freer Gallery neither lends objects nor exhibits works borrowed from other museums or individuals, the Sackler Gallery both lends from its collections and borrows works to augment its own holdings. Collections acquisition for the galleries is coordinated; together the galleries are an important resource for the cultural heritage of Asia. These two museums complement each other in all activities and are jointly administered by one director and served by a single staff.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the Arthur M. Sackler Gallery and the Freer Gallery of Art.

PROGRAM:

ARTHUR M. SACKLER GALLERY - The Arthur M. Sackler Gallery opened in September 1987 as a national museum of Asian arts. In addition to exhibiting its permanent collections and loans from international sources, the Gallery presents in-depth public programs related to exhibition material. The goal of the Sackler Gallery is to expand knowledge about and appreciation of the arts of Asia and the cultural and physical contexts from which these works emerge.

Exhibitions - Exhibitions provide the primary public links with the cultural diversity of Asia. The exhibitions at the Sackler Gallery draw from national and international public and private collections and from the Gallery's own collections. During FY 1993, eight exhibitions opened, and three rotations from the permanent collections were accomplished. Major temporary exhibitions included "The Golden Age of Sculpture from Sri Lanka," "Joined Colors: Decoration and Meaning in Chinese Porcelains," and "Metalwork and Ceramics from Ancient Iran." These exhibitions made important scholarly contributions and provided accessible information to the general public. Exhibitions scheduled to open in FY 1994 include "Contemporary Porcelains from Japan" and "Korean Arts of the Eighteenth Century: Splendor and Simplicity."

Education - Educational activities at the Sackler Gallery focus on outreach to the Washington metropolitan area and nationally through teacher workshops, the development of curriculum materials, and public programs. These programs include docent tours of permanent and visiting exhibitions designed for the general public, students, and special interest groups. "ImaginAsia," a lively hands-on program offered weekly, is particularly successful. Children and their adult companions use an activity guide to explore aspects of an exhibition; inspired by what they see, they then make objects in the Sackler Gallery's classroom.

The Gallery works closely with Asian communities and with Americans of Asian background in developing public programs. An example is the Festival of Sri Lanka, a ten-day program of dance and films planned in conjunction with "The Golden Age of Sculpture from Sri Lankan." Working with the embassy of Sri Lanka, the local Sri Lankan community, and the Sri Lankan Film Bureau, the Gallery staff held screenings for five Sri Lankan films and developed programs of Sri Lankan dance performed both inside and outside on the mall at the Museum entrance.

Research - Research provides the basis for Sackler Gallery exhibitions, publications, and collections acquisitions. The research program involves both visiting scholars and the permanent curatorial and conservation staff. The Gallery disseminates research results to the public through lectures, symposia, collection research files, books, exhibitions and exhibition catalogues, free gallery guides, brochures, papers, articles, and the quarterly magazine Asian Art. The Sackler Gallery also cooperates with the Museum Rietberg in Zurich, Switzerland, to publish Artibus Asiae, a major international journal of scholarly research on Asian art. Exhibition catalogues published by the Sackler for major loan exhibitions include Ancient Japan and Joined Colors: Decoration and Meaning in Chinese Porcelain. Curators are preparing an exhibition of Japanese porcelain and a major loan exhibition from Korea, and research is in progress toward a major international exhibition on Islamic art in cooperation with the National Museum of African Art. Gallery guides written by Sackler curators were published on Ancient Japan, Archaeology and Art of Ancient China, Joined Colors: Decoration and Meaning in Chinese Porcelain, and The Golden Age of Buddhist Art in Sri Lanka. An international symposium, "Art, Technology, and Society in Ancient Japan," was organized under a Japan Foundation grant awarded to the Sackler Gallery; publication of the proceedings is in progress.

An international symposium, "Joined Colors: Decoration and Meaning in Chinese Porcelain," will be presented in 1993.

Curators of the Freer Gallery of Art and the Arthur M. Sackler Gallery are regularly invited as lecturers at symposia and scholarly meetings, universities, and museums in the United States and abroad. In addition to their museum publications, curators have published or are researching and writing articles, research papers, books, and essays for exhibition and collections catalogues published by other institutions. Curators serve on the editorial boards of major scholarly journals such as Artibus Asiae and Ars Orientalis and as consultants to institutions seeking expertise in their research specialties. They contribute to the graduate training of scholars by serving as adjunct visiting faculty at such institutions as Princeton University, Johns Hopkins University, the University of Michigan, and the University of Maryland.

Both the Sackler and Freer galleries attract an increasing number of visiting scholars, fellows, and interns who work closely with staff curators on collections-related topics. Scholars in residence are supported by a variety of research grants.

Conservation - Conservation research seeks to understand the origin and physical nature of objects and thereby to improve their care and treatment. A major expansion of the conservation facilities in the renovated Freer Gallery Building also serves the Sackler's collections, providing new space for research efforts. Conservation research during FY 1993 included analysis and identification of the stones used in South Arabian sculpture; comparative microstructural studies of archeological bronzes in the Sackler collections with those from other parts of the world; and the publication of a joint Sackler and Freer study of ancient Iranian metalwork in the collections.

Among the objects treated during FY 1993 are Chinese hand scrolls and album leaves; Persian paintings, Koran pages, and a ceramic relief for the exhibition "Divine Word"; Chinese ceramics for the exhibition "Joined Colors" and various individual objects.

Collections Acquisitions - The Gallery collects art from all of Asia in its broadest sense. Objects acquired for the collection are of the highest quality in terms of aesthetic standards, cultural and historical importance, and physical condition. Although the Sackler Gallery does not have a base of Federal funding for the purchase of objects for the permanent collection, limited Trust funds are available for collections acquisition.

During FY 1993, the Sackler Gallery acquired 81 objects by gift and bequest, 6 objects by transfer, and 12 objects by purchase. Examples of acquisitions include an Egyptian epigraphic panel (now the earliest Islamic work of art in the collections), a Japanese lacquer box, a 17th-century Indian painting, two contemporary ceramic pieces, and a 19th-century jade book from China.

FREER GALLERY OF ART - The Freer Gallery of Art, which opened in May 1923, is the Smithsonian's first art museum. Its collection contains works from across Asia. The Gallery also has a small collection of American art of the late 19th and early 20th century, including the largest collection of paintings by the American expatriate artist James McNeill Whistler. In addition to the program on American art and the interrelationship of American and Asian traditions, the goal of the Freer Gallery, like that of the Sackler Gallery, is to expand the knowledge and appreciation of works of art from Asia and their cultural and physical contexts through exhibitions, education, research, conservation, and acquisitions.

With the reopening of the Freer Gallery in May 1993, art objects are presented to the public with wall text panels and gallery guides that provide cultural context. The Gallery also features a continuing calendar of public programs presenting the living arts of Asia and the pluralistic aspects of individual Asian societies.

Exhibitions - The reopening of the Freer Gallery was the major event of FY 1993. Tremendous effort and resources went into producing a new system of permanent cases, lighting systems, and informational and directional signage. The conceptual flow of galleries was laid out to follow geographic continuity as well as to reflect Charles Lang Freer's founding vision. Great care was taken to ensure that the ambiance of the "Old Freer" was maintained, that information in the galleries was presented with the broadest possible audience in mind, and that the guidelines of the Americans with Disabilities Act were met. Because of the complex nature of the natural and artificial light systems at the Freer, a long-term project is under way to evaluate the daylight control systems and ensure that objects will be exposed to safe levels of light.

Education - The enhanced facilities for public programs and the comprehensive survey of Asian art at the reopened Freer Gallery has enabled the Gallery to expand its educational outreach. Two activity guides for children have been written, one for the Peacock Room and one for a tour of the entire Gallery. Programs in the renovated Meyer Auditorium have been developed to reach Americans of Asian background, Asian communities, and those interested in performing arts. An example is the series to be presented in October 1993 on the "Fifth Generation of Chinese Film Makers." These films, along with a series of films from the Republic of China offered in July, have had special impact on the Chinese community in the Washington metropolitan area, which has no other regular venue for Chinese films.

Funding for a Freer teacher associate was obtained for the summer of 1993, enabling a public school teacher to work with the education department in developing curricula related to the permanent collections. An National Endowment for the Humanities teacher scholar will be in residence at the Freer during 1993-94.

Research - The Freer and Sackler galleries share staff as well as research and support facilities that together constitute an international center for advanced scholarly research and public education of Asian art and culture. Research facilities include the newly renovated and expanded laboratories for conservation and scientific research and the library and archives.

Although the results of research are most visible in exhibitions, the Freer disseminates research through collection records, lectures, and published papers and books. Research by staff curators on the permanent collections resulted in the selection and exhibition of objects in 20 galleries and additional circulation areas for the reopening to the public of the Freer Gallery of Art. Many recent acquisitions and objects not previously exhibited were researched and installed. Two books, Freer: A Legacy of Art and The Princess and the Peacocks, a book for young readers, were published for the reopening. Curators wrote nine gallery guides for free distribution in the galleries.

A scholarly symposium in cooperation with the Smithsonian National Associates Program will be presented in 1994. Research in progress includes projected publication of books and articles on the permanent collections of the Freer Gallery and exhibitions on the conservation and mounting of Japanese paintings and the relationship between Whistler and Japan.

Conservation - Extensive preparation for the Freer reopening included treatment of numerous Indian and Persian paintings, Chinese metalwork, and Korean ceramics. Since the reopening, a major project to treat 150 pieces of Islamic ceramics has begun and is expected to continue for several years. East Asian paintings conservation by specialists trained in traditional Japanese and Chinese methods involved pre-exhibition remounting and other conservation work, again directed primarily toward the Freer reopening exhibition. A special painting conservation program in Japan, completely supported by a private research foundation and designed to remount and restore Japanese paintings in the Freer collections, continued.

The Department of Conservation and Scientific Research carries out object conservation and analysis with a staff of conservators and conservation scientists. Beyond their roles as conservators, staff engage in primary research using scientific methods and technical equipment to determine dates and methods of manufacture, geographic origins, and materials. Conservation research on ceramics and ceramic composition in FY 1993 included a major project on glaze analysis of Korean ceramics and Islamic pottery from Basra and Cairo. East Asian painting research included the continued identification of organic colorants and studies on the microstructure of paint layers and of paintings. Lacquer research has been initiated on identification methods for oriental lacquer and for adulterants.

Collections Acquisitions - In FY 1993, the Gallery received 180 gifts, including ceramics from China and Tibet. A large donation was added to the study collection of 173 shards dating from the 4th century B.C. to the 14th century A.D. In FY 1993, the Gallery purchased 19 objects with both Federal and private funds. Purchased objects included a very important Chinese bronze "pan" dating from the Western Zhou period (1027-771 B.C.) in addition to ceramics from Japan, Thailand, and China. Four exceptional examples of calligraphy from China and one from Japan were also added to the collections through purchase, along with a Jain meditation bronze shrine from North India dated 1096 by inscription.

NONAPPROPRIATED SOURCES OF FUNDING:

ARTHUR M. SACKLER GALLERY:

Unrestricted General and Special Purpose Funds - Modest proceeds from sales in the Sackler museum shop help support the purchase of acquisitions, the publication of exhibition catalogues and gallery guides, and the operation of the shop itself.

Restricted Funds - These funds are contributions in the form of grants and gifts from individuals, foundations, organizations, and corporations for specific purposes. A substantial gift from an anonymous donor endowed particular public affairs expenses. American Express Company financially supported in part the exhibition "The Golden Age of Sculpture from Sri Lanka." Members of the Min Chiu Society, Hong Kong, contributed financial support for the exhibition "Joined Colors: Decoration and Meaning in Chinese Porcelain." The video that accompanied this exhibition received financial support from the Tianminlou Foundation and in-kind support from Sada Planning, Inc., and the University of Southern California. The opening reception for this exhibition was underwritten by the Hong Kong Economic and Trade Office, British Embassy. The Andrew W. Mellon Foundation made the final matching gift toward establishment of an endowment for scholarly publications. Friends of Asian Arts at the Freer and Sackler Galleries continues to support collections acquisitions.

FREER GALLERY OF ART:

Unrestricted General and Special Purpose Funds - Proceeds from sales in the Freer museum shop help to support acquisitions and publications. Several corporations contributed unrestricted funds that were used to offset the expenses related to the Freer reopening.

Restricted Funds - These funds are contributions in the form of grants and gifts from individuals, foundations, organizations, and corporations for specific purposes. The final installment of a major gift for renovation of the Eugene and Agnes E. Meyer Auditorium was received from the Island Fund in the New York Community Trust. The Eugene and Agnes E. Meyer Foundation provided support toward educational programs in the Meyer Auditorium. The Art Research Foundation in Japan provided major funding for supplies and materials for the East Asian Conservation Laboratory and continued its in-kind support for the conservation of paintings in the Freer collections. Elizabeth E. Meyer made a gift to create the Bill and Mary Meyer Concert Series, and Duron, Inc., provided funding for the inaugural concert in the Meyer Auditorium. Gifts from Kathleen Preciado and others in memory of Richard Louie made possible an endowment to fund an annual internship at the Freer Gallery.

The major portion of the nonappropriated Trust funds for the Freer comes from the Charles Lang Freer bequest, which restricts their use. These funds help finance the Freer's professional curatorial and administrative staff, acquisitions for the collections and the library, maintenance of the Freer courtyard, and operation of the Freer museum shop. Income from the Harold Stern Memorial Endowment supports scholarly research in Japanese art. Funds from the Forbes Endowment support research in conservation.

Archives of American Art

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	24	1,346	1	96	-	2	17	750	-	-
FY 1994 Estimate	24	1,373	1	133	-	2	17	750	-	-
FY 1995 Estimate	24	1,373	1	133	-	2	17	750	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Archives of American Art (AAA), a national research repository with regional centers in New York, Boston, Detroit, and Los Angeles, has the world's largest collection of archival materials relating to the history of the American visual arts, including original manuscripts, photographs, works of art on paper, and tape-recorded oral and video interviews. The collection is housed in Washington, D.C., with microfilm copies of many of the documents made available in the regional centers and through national and international interlibrary loans. The Archives actively seeks out, collects, and preserves original source materials for study by scholars, students, curators, collectors, and others interested in the history of art and encourages research in American art and cultural history through publications, symposia, lectures, and other public programs.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the Archives of American Art.

PROGRAM - The Archives of American Art documents the art and cultural history of the United States and encourages its study by collecting, preserving, and making easily accessible the primary source materials that are essential to research. Each year, AAA raises a significant portion of its operating funds from private sources.

Collections Acquisitions - During the first half of FY 1993, AAA taped 28 interviews and added 62 groups of papers containing more than 144,500 separate items to its collections. These include informal photographs of notable artists, sketchbooks, journals, scrapbooks, out-of-print exhibition catalogues, personal letters, and other primary source material. Also, AAA's collecting staff gathered the papers of painters Raphael Soyer (1899-1989), John Woodrow

Wilson (1922-), and Bond Francisco (1863-1931); printmakers Michael Mazur (1935-) and Prentiss Taylor (1907-1991); ceramist Beatrice Wood (1893-); a former museum director of the National Portrait Gallery, Charles Nagel (1899-1992); and the Santa Monica Art Gallery and Art Space in Los Angeles. Other collections acquired enhance the diversity of AAA's holdings, such as the records of the fine art appraisal firm of O'Toole-Ewald Art Associates, Inc.; an oral interview with filmmaker-photographer Rudolph Burckhardt (1914-); an oral interview with Edith Wyle, founder of the Egg and the Eye Gallery and Restaurant which later became the Los Angeles Craft and Folk Art Museum; as well as interviews conducted with the noted art restorer Carroll Fenton Wales (1916-), art historian Peter Selz (1919-), typographer Jack Stauffacher (1918-), and New York art dealer Andre Emmerich (1924-). Finally, AAA acquired an extensive interview with William E. Woolfenden, who worked with the Archives of American Art from its founding in 1954 and served as its second director from 1964 to 1983.

Conservation and Collections Management - AAA microfilms as much of its collections as possible, both to preserve the original documents from the wear and tear inherent in handling and to make microfilm copies available to a wide audience through AAA research centers and interlibrary loans. During the first half of FY 1993, more than 75 linear feet of collections (some 75,000 documents) were processed and catalogued, and 53 reels of microfilm were produced.

Research - AAA's extensive and varied collections offer researchers an in-depth, primary reference base for advanced study in American art history and in fields of cultural, political, and social history. In the first six months of FY 1993, AAA centers received 1,666 research visitors and responded to 2,045 mail or telephone inquiries. Some 4,772 reels of microfilm were studied, and AAA sent out an additional 1,302 reels through its interlibrary loan program.

In addition, AAA published its newest finding aid to the collections, A Guide to Archival Sources for French-American Art History in the Archives of American Art, which describes papers relating to American artists who lived, studied, and worked in France. AAA is also conducting an active research program in France to gather information about archival holdings in that country that refer to American artists. The Archives' scholarly Archives of American Art Journal, published quarterly, presented articles based on research in the collections, as well as reviews of new books, and collections reports from AAA regional centers. The Archives loaned original papers for exhibitions at a variety of institutions. Material for the collection was shown at the Institute of Contemporary Art in Amsterdam, the Los Angeles County Museum of Art, the Museum of Fine Arts in Boston, the National Museum of American Art, the New York Historical Society, and the Philadelphia Academy of the Fine Arts.

Public Programs - All AAA centers sponsor programs and exhibitions that reflect the Archives interests. The New York Regional Center hosted two exhibitions: one of a noted sculptor, "Collections-Traces-Connection: Selections from the Robert Smithson Papers," and the other entitled "Romare Bearden Draws, Too: From Tradition to Form." An exhibition of photographs from the AAA collection, "The Telling Image: Portrait Photographs from the Archives of American Art," opened in Washington at the National Portrait Gallery, and "A

Guide to Artist's Maps" was mounted in the library of the American Art and Portrait Gallery Building.

In Washington, AAA sponsored five "Lunchbag Seminars" at which scholars presented and discussed their current research topics in an open-forum arena. AAA's West Coast Regional Center hosted two scholar's receptions for graduate students studying research methodology.

New England members were offered a curatorial tour of the Boston Museum of Fine Arts exhibition, "The Lure of Italy: American Artists and the Italian Experience 1760-1914." In spring 1993, also in Boston, members were treated to a lecture by art critic Hilton Kramer entitled "Some Early Critics of American Modernism." "An Evening with David Hockney and Friends" in Los Angeles applauded the contributions to the art world of this renowned artist, and in Detroit some 124 artists from across the country transformed traditional, country mailboxes into works of art for an auction-benefit. In addition, New York members were invited to a lecture by Dr. William Agee, former director of the Museum of Fine Arts in Houston; a tour of the Leo Castelli Gallery in Manhattan; and a visit to the personal art collection of Werner Kramarsky. Trips for members to Florence and Indonesia afforded an exploration of two very different approaches to art.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Provided by annual allotment from the Smithsonian Institution, these funds provide partial support for basic programs including publication of the Archives' quarterly Archives of American Art Journal; foundation fund-raising, and Board of Trustee activities.

Restricted Funds - Individual gifts, foundation and corporate grants, dues from the Board of Trustees, fund-raising activities, and AAA's membership program generate funds for the Archives. This income helps to underwrite AAA's general operating expenses, including AAA's oral history and publications programs and support staff salaries and expenses.

In FY 1993, additional funds from the Florence Gould Foundation continued to support AAA's Paris Survey Project, which is identifying primary, archival source material relating to American artists in Paris in both public and private collections. In addition, a grant from the Luce Foundation underwrites national collecting in the South, New Mexico, and the Northwest, while grants from the Brown, Times Mirror, Robert Mapplethorpe, Ellis Phillips, and Dextra Baldwin McGonagle Foundations are helping to support general operations, including arrangements and descriptions of collections and the publication of finding aids and guides.

Cooper-Hewitt Museum

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	39	2,262	17	990	1	768	1	395	-	36
FY 1994 Estimate	39	2,308	17	1,083	1	768	1	329	-	-
FY 1995 Estimate	39	2,308	17	1,083	1	768	1	329	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - Cooper-Hewitt, National Museum of Design, explores the creation and consequences of the designed environment. Design, a process of shaping matter to a purpose, is a fundamental activity. The designed object may be as common as a paper cup, as distinctive as a crystal goblet, or as complex as a city. Cooper-Hewitt investigates the structures and effects of these products of design and their roles as forces for communication and change. The Museum is interested in all aspects of design, including urban planning, architecture, industrial design, landscape design, interior design, textiles, theater arts, advertising, and graphic arts. As a place for collected objects, memories, and experiences, the Museum is a public trust founded on the principle that understanding the past and present will shape the future. Today the scale and pace of change require a new understanding -- one that recognizes that individuals, societies, and the natural environment are linked through design.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the Cooper-Hewitt Museum.

PROGRAM - Cooper-Hewitt is the only museum in the United States devoted exclusively to historical and contemporary design. The Museum pursues its goal through exhibitions; publications; provisions for collections study, research, and display; and educational programs for professionals, the adult public, and schoolchildren. In addition, the Museum jointly offers with the Parsons School of Design, a master's degree program in the history of decorative arts.

Exhibitions - The innovative exhibition "The Power of Maps" opened on October 6, 1992. Designated as Cooper-Hewitt's Columbus Quincentenary Commemoration, this exhibit

presented more than 300 historic and contemporary maps dating from 1500 B.C. to the present. The exhibition demonstrated that, like advertisements and other forms of graphic design, maps express particular viewpoints in support of specific interests, shaping our perception of the world and our place in it. Also during FY 1993, the Museum mounted two exhibitions of objects from its permanent collection: "Revolution, Life, and Labor: Soviet Porcelains 1918-1985," which highlighted the Ludmilla and Henry Shapiro Collection of Soviet propaganda porcelains, and "From Background to Foreground: Looking at an 18th-Century Wallpaper," which examined aspects of design, manufacture, and use of a single wallpaper in its historic and social context. Both exhibitions ran from November 1992 to April 1993.

"Czech Cubism: Architecture and Design" opened on April 6, 1993. In its Cooper-Hewitt venue, this major traveling exhibition of furniture, ceramics, metalwork, and drawings was interpreted in a new light. The aim of Cooper-Hewitt's installation was to disclose the expressive intentions of the Czech Cubists by relating their work to poetic language.

The first in a series of exhibitions drawn from Cooper-Hewitt's African American Design Archive, "Process of Design: Cheryl R. Riley," is on view from April 26 through September 26, 1993, highlighting the work of a contemporary designer whose work is in the collection of Cooper-Hewitt.

"Mechanical Brides: Women and Machines from Home to Office" opened on August 17, 1993. This exhibition explores how the persistent association of certain devices with female users reflects and reinforces stereotypes about women's roles. The exhibition links 20th-century domestic appliances and office equipment to advertising, photojournalism, film stills, instruction manuals, and oral histories to show how these objects were sold, used, and imagined.

Future exhibitions now in planning stages include the work of the 20th-century American industrial designer Donald Deskey and an exhibition exploring the issues of universal design and accessibility in the built environment.

Publications - In FY 1993, the Smithsonian Institution Press published Courierspeak, a multi-lingual, pocket-size reference book on protecting and caring for art and other precious materials during transit that was written by Cooper-Hewitt's registrar, Cordelia Rose. A catalogue was produced for the exhibition "Revolution, Life, and Labor: Soviet Porcelains 1918-1985," and award-winning brochures accompanied "The Power of Maps" exhibition.

Books to be published by the end of 1993 include The Edge of the Millennium: Architecture, Urban Planning, Product and Communication Design, a critical analysis of the role of design as the world approaches the year 2000. This book evolved from Cooper-Hewitt's critically acclaimed symposium of the same name. In addition, a book will be published to accompany the "Mechanical Brides: Women and Machines from Home to Office" exhibition.

Work continues on other publications, such as a large, scholarly book based on the Cooper-Hewitt Museum, its collections, philosophy, and definition of design; and a catalogue based on the work of Donald Deskey and the designer's archives housed at the Museum.

Collections Activity - For the first three quarters of FY 1993, Cooper-Hewitt acquired 631 additional objects for its collection. Among the most notable were a piece of 17th-century embroidered fabric from England; a scarf printed during World War II to raise money on behalf of the war effort; a prototype model for a portable fax machine; and 49 rolls of French, American, and English wallpaper of 19th- and 20th-century designs. During the same period, the Museum loaned 141 objects to 20 museums and borrowed 357 objects. In preparation for outside loans and for use in Cooper-Hewitt exhibitions, the Museum's two conservators treated 100 objects.

Educational Programs - With federally appropriated funds in FY 1993 for use by the Education Department, Cooper-Hewitt continues to offer programs for children and free public programs. In connection with "The Power of Maps" exhibition, more than 10,000 students from public and private schools participated in free guided tours of the exhibition and a variety of activities centered on maps.

"A City of Neighborhoods: Bridging School and Community," a community-based program launched in FY 1992 by Cooper-Hewitt and the New York City Chapter of the American Institute of Architects, brings teachers and architects together to explore ways that community resources can be integrated into the elementary and secondary school curricula. The program consists of three intensive weekend workshops focusing on the physical and social fabric of a specific neighborhood. Three series, each highlighting a different Manhattan neighborhood, have been presented to date. During FY 1993, the program explored the Upper West Side of Manhattan.

Some of the notable lectures presented in FY 1993 include "Topography of Maps," "Mapping an Epidemic: AIDS in New York City," "Workshop in Contemporary Design: Design and Critical Theory," "The New York Subway: Transportation Design," and "World Cities for the 21st Century."

As part of Cooper-Hewitt's outreach efforts, the Museum continues to sponsor a summer series of free lectures and outdoor concerts. The series was made possible by a grant from the Smithsonian's Educational Outreach Program. This year the series, entitled "Crosscurrents: African American Design," celebrated the traditions that give form and meaning to African American culture. Four multi-media presentations explored how social and cultural messages are communicated visually and how both history and popular culture shape the dynamic essence of African American heritage. Approximately 2,700 people attended the series. In addition, the Museum presented two free Sunday events in the garden. On July 18, 1993, the Tremont Singers performed a concert of spirituals, and on August 8, 1993, Cooper-Hewitt presented "Design Express: A Kaleidoscope of Family Fun," a fun-filled day of activities for families that featured craft workshops and live music.

Research - Approximately 375 scholars, private individuals, designers, and corporate interests visited the collections for research purposes. Visitors included representatives from corporations and scholars and researchers from museums and universities around the world. A notable visitor was Hengyian Tu from the Shanghai University of Engineering Science in China, who paid several visits to the Museum's Textile Department. The Museum's specialized research library, which complements the collection, received 660 visitors.

Established to advance the understanding of design and decorative arts as it encourages and supports a promising young scholar, the Peter Krueger-Christie's Fellowship provides a stipend of $15,000 for a one-year period and a travel allowance of $2,000 for research at Cooper-Hewitt. The fellowship was established by the Peter Krueger/Christie's Foundation and augmented by Mr. and Mrs. Harvey Krueger and Christie's, Inc. in honor of Peter Krueger. The fellowship supports the scholarly work of an advanced student with interests in the areas in which Cooper-Hewitt collects. Named in FY 1993, the fourth Fellow will conduct research on metal furniture mounts. In addition, Mr. and Mrs. Harvey Krueger have supported a paid summer internship program for college undergraduates. Six interns were selected in an application process and have been placed in various departments in the Museum to gain firsthand experience with museum work. Two additional paid summer internship programs for undergraduates and master's degree level graduate students, each providing a stipend of $2,500 over a period of ten weeks, were launched this year. The Mark Kaminski Summer Internship in a field related to architecture encourages young students of architectural history, design, and design criticism through work in Cooper-Hewitt's extensive holdings of architectural drawings, archives, and related collections. It was created to honor the memory of architect Mark Kaminski. The Crown Craft/Perry Ellis Internship in the history of pattern, ornament, and decoration in design has been established to encourage young students of art history or design through work on the research, analysis, and documentation of ornamental design in the Museum's collections and library.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - The Museum obtains these funds from a variety of sources, including museum shop sales, product development, individual and corporate memberships, admission fees, donations, fund-raising events, and annual allotments.

Restricted Funds - Designated for specific purposes, these funds derive from grants, bequests, and donations from individuals, organizations, and corporations. During the first three quarters of FY 1993, Cooper-Hewitt received funds and in-kind donations from American Express Co., Sun Microsystems, Inc., and Geographic Data Technology, Inc., for "The Power of Maps" exhibition; Brunschwig & Fils, Inc., Chambord Prints, Inc., and Hawthorne Prints, Inc., for "From Background to Foreground: Looking at an 18th-Century Wallpaper" exhibition; and the Sister Fund, the Smithsonian Institution Special Exhibition Fund, NYNEX, and New York Telephone for the "Mechanical Brides: Women and Machines from Home to Office" exhibition. The Enid and Lester Morse Foundation pledged $20,000 a year for five years to support exhibitions of Cooper-Hewitt's permanent collection. The Barker Welfare Foundation

donated funds for Cooper-Hewitt's new museum shop. Hallmark Corporate Foundation donated funds for a future exhibition on the industrial designer Henry Dreyfuss, and New York Times Foundation pledged $10,000 a year for three years to support "A City of Neighborhoods" educational programs.

Private support came from the Hayden Family Foundation, Cahners Publishing, Baird Family Fund, Drue Heinz Foundation, the Arthur Ross Foundation, and other generous donors. The Helena Rubinstein Foundation again supported educational programming through scholarships for graduate students enrolled in the master's degree program in the history of decorative arts. These scholarships have been awarded since the program's founding in 1982.

Government Grants and Contracts - Various government agencies and departments provide these funds for specific program support. The Natural Heritage Trust of New York State, with the support of State Senator Roy Goodman, has provided funds to help the Museum cover its general operating costs. The Museum annually seeks funding from the New York State Council on the Arts for exhibition support and other programs. In FY 1993, Cooper-Hewitt submitted funding requests to the Council for the "Mechanical Brides: Women and Machines from Home to Office" exhibition, the future exhibition on universal design, and support for collections management and storage.

National Museum of African Art

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	58	3,951	-	-	-	74	-	377	-	-
FY 1994 Estimate	58	3,995	-	-	-	30	-	935	-	-
FY 1995 Estimate	58	3,995	-	-	-	30	-	935	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The National Museum of African Art (NMAfA) is devoted to the collection, preservation, research, exhibition, and interpretation of the visual arts of Africa. Although the Museum's primary emphasis is on the traditional cultures of the sub-Saharan region, it also studies and exhibits the arts of other African areas, including the arts of North Africa and the ancient and contemporary arts of the entire continent.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the National Museum of African Art.

PROGRAM - The National Museum of African Art educates and instills an appreciation for the cultures and visual arts of Africa. These goals are accomplished through the acquisition, care, research, exhibition, and interpretation of works of art in the context of African history, cultures, and aesthetics.

Collections Acquisitions - During FY 1993, NMAfA acquired 17 works of art. All are culturally significant expressions of artistic creativity. Major purchases include a rare wooden mask and two ivory figurative pendants from the Lega peoples of Zaire. These objects were used by the Lega to teach important values: moderation, nonviolence, solidarity, respect, and moral as well as physical beauty. The Museum also purchased for its collection three hand-built clay vessels made by Berber women living in the Kabyle region of Algeria.

During FY 1993, the Eliot Elisofon Photographic Archives acquired by gift 5,700 35mm original slides of West African art and culture; 153 vintage historical postcards mainly from Central Africa, dating between 1900 and 1920; 1,153 black-and-white prints devoted primarily to

Central African art and culture; and 68 lantern slides of people and sites in southern Cameroon, dated about 1910.

Collections Management - The Conservation Department devoted special attention in FY 1993 to conservation and storage of the Museum's growing collection of paintings and works on paper by modern African artists. In addition, the conservation survey of the Museum's permanent collection is two-thirds completed. The survey data are on a computer data base.

In FY 1993, the Registration Department updated and refined its collections data base and added new features for streamlining the work of the Department. In cooperation with the Conservation Department, the staff rehoused the Museum's collection of two-dimensional works on paper into suitable flat file storage.

The Eliot Elisofon Photographic Archives entered 11,000 new records into the custom-designed data base containing information about field photographs of African life. The Archives is presently conducting a review of photographs of objects in NMAfA's holdings. New shelving was added to accommodate the growing collection of images.

Research - Research continues on the sculptures of the Nigerian artist Olowe of Ise (ca. 1875-1938), who carved the important palace door in the Museum's permanent collection. A research monograph on the figurative art of the Baule of Côte d'Ivoire is well advanced; Baule figurative sculpture was also the subject of a gallery exhibition in FY 1993. A research article on a selection of Central African ceramic vessels from the Museum's collection was submitted for publication.

Exhibitions - In FY 1993, NMAfA opened a major international loan exhibition, "Astonishment and Power: Kongo Minkisi & The Art of Renée Stout." It examined the historic and visually impressive sculptures called minkisi of the BaKongo people of Central Africa. Paired with the minkisi were selected works by the Washington, D.C., African American artist Renée Stout, whose sculpture resonates with many of the visual and conceptual ideas of minkisi.

Two exhibitions were mounted in the Museum's experimental gallery. "Elmina: Art and Trade on the West African Coast" examined the history and art history of Elmina, a coastal town surrounding the 15th-century Portuguese trading fort built in the region once known as the Gold Coast, known today as Ghana. "Dreaming the Other World: Figurative Art of the Baule of Côte d'Ivoire" explored an invisible otherworld that the Baule believe is inhabited by human spirits. The exhibition presented carved images that represent otherworld mates and examined 20th-century stylistic shifts in the sculpture.

The Museum reinstalled its permanent installation of sculpture from Central Africa to accommodate 11 recent acquisitions. The Museum also installed a new signage system and renovated its aboveground pavilion reception area to serve its public effectively and increase accessibility.

Publications - In FY 1993 the Museum published Astonishment and Power to accompany the exhibition of the same name; two brochures also interpreted this exhibition for the public. A grant from the Shell Oil Company Foundation made possible the publication of a brochure-guide devoted to the collection of the Eliot Elisofon Photographic Archives. An interpretive brochure accompanied the exhibition "Dreaming the Other World: Figurative Art of the Baule, Côte d'Ivoire."

Education - The Education Department informs the public about African art and culture through interpretive programs, including tours, school and teacher-training programs, symposia, seminars, films, workshops, and demonstrations. As part of the program "Living Artists," the Museum hosted Renée Stout, an African American artist, and Gilbert Bobbo Ahiagble, a Ghanaian master weaver. During FY 1993, more than 1,300 public programs were offered by NMAfA, serving 36,000 individuals. A family guide, "Animals in Benin," provided new interpretive experiences for adults and children visiting the Museum's Royal Benin Collection.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds come from the Museum's share of proceeds from the museum shop, courses conducted in cooperation with Washington, D.C., metropolitan area public education institutions, and private unrestricted donations. NMAfA uses these funds to provide additional support for its education and collections acquisition programs, exhibition openings, publications, and travel costs associated with the Museum's Commission meetings. Grants from the Institution's Special Exhibition Fund supported the planning phase for the exhibition "Astonishment and Power: Kongo Minkisi & The Art of Renée Stout" and the implementation phase for an exhibition on the art and culture of the Islamic world, jointly funded by NMAfA and the Arthur M. Sackler Gallery. A two-year grant from the Institution's Research Resources Program was awarded in FY 1993 for the preservation and cataloguing of the Eliot Elisofon Motion Picture Film Collection. Funds from the Scholarly Studies Program, Educational Outreach Program, and Research Opportunities Fund are also available to support research and education programs.

Restricted Funds - Individuals, foundations, organizations, and corporations provide grants and gifts for specific purposes. The Museum receives income from a collections acquisitions endowment established in FY 1988. Using grants from the Shell Oil Company Foundation received in FY 1992 and FY 1993, the Museum published a brochure-guide to the Eliot Elisofon Photographic Archives and a brochure to accompany the exhibition "Elmina: Art and Trade on the West African Coast." A grant in FY 1993 from the James Smithson Society made possible the acquisition of two rare figurative ivory pendants from the Lega peoples of Zaire.

Anacostia Museum

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	20	1,152	2	175	-	-	-	1	-	-
FY 1994 Estimate	20	1,174	2	183	-	-	-	-	-	-
FY 1995 Estimate	20	1,174	2	183	-	-	-	-	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - Located near Fort Stanton Park in southeast Washington, D.C., approximately six miles from the Mall, the Anacostia Museum is a national resource for African American history and culture, community-based museology, the exploration and examination of contemporary black popular culture and cultural products and their impact on the African American population. The Museum's research, collecting, exhibition, and educational outreach activities focus on Washington, D.C., and the Upper South, a region that includes Virginia, Maryland, North Carolina, South Carolina, and Georgia. The Museum's activities and projects offer scholars and the public a unique opportunity to study black history and culture from both scholarly and constituent perspectives.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the Anacostia Museum.

PROGRAM - The Anacostia Museum serves as a national model for community-focused museums across the country. Additionally, the Museum plays a significant flagship role for African American museums and other cultural organizations in the Upper South. Devoted to the interpretation of the black experience in Washington, D.C., and the Upper South, the Museum's unique multi-faceted and multi-disciplinary program of applied research, collections development, documentation, exhibitions, and educational and outreach projects provides local, regional, national, and international audiences with greater understanding of black contributions to American society. The Museum's research, collections development, and outreach projects, while local and regional in focus, are designed to serve as models with potential for replication in the national and international arenas.

Research and Collections Development - The Museum's groundbreaking collections management policy was approved in January 1993. It focuses on 12 areas of intellectual inquiry (e.g., black teenage culture, women in the Upper South, black spiritual traditions, black radio and music industries) and has at its core a community-based educational campaign designed to increase individual, household, or organizational capacities in caring for cultural materials held throughout the African American community. This community-focused type of collecting resulted in the acquisition of materials from Anacostia resident Percival Bryan. Mr. Bryan, a native of Jamaica who currently works as a taxi driver, was a butler in the Roosevelt White House. He is a collector of autograph books and a photographer and his collection has provided great insight into black social and community life. New research initiatives developed during FY 1993 include historical examinations of North Brentwood, Maryland, the state's first incorporated black town, and Gum Springs, Virginia, a long-standing black community in the Old Dominion. Additionally, research staff began the development of a multi-faceted project that will focus on African American farming and rural life. In early FY 1994, the Museum will sponsor a conference on black music and will begin collecting material related to the radio and music industries.

Exhibits - In FY 1993 as part of the observance of the Museum's 25th anniversary, three important traveling exhibits were mounted: "Two Sculptors, Two Eras: Richmond Barthe and Richard Hunt"; "Body and Soul: The Alvin Ailey American Dance Theater"; and "Always There: The African American Presence in American Quilts." In FY 1994 the Museum will serve as the premiere host for "Before Freedom Came: Black Life in the Antebellum South." This groundbreaking exhibit, developed by the Museum of the Confederacy, will be circulated nationally by the Smithsonian Institution Traveling Exhibition Service. The Museum will also mount "Malcolm X: Man, Ideal, and Icon." An art exhibit, this project features creative impressions of one of America's most talked about civil rights leaders. The Anacostia Museum is the only African American-focused museum in the country to host this important exhibit. "Black Mosaic: The Changing Face of Black Life in Washington" will open in August 1994.

Education and Outreach - During FY 1993 the museum's educational and outreach activities resulted in more than 260 programs reaching close to 80,000 people. Programs and activities were held at the Museum and at a variety of sites in the District of Columbia, Virginia, and Maryland. Circulation for the Museum's newsletter, Connections, increased to 50,000. New ventures in programming included dance and film festivals and the collaborative creation of a work of art with internationally renowned ceramic sculptor Martha Jackson Jarvis. Additionally, the Museum began an exciting partnership at the Lucy Ellen Moten Elementary School. Located four blocks from the Museum, the school will serve as a site for programs and the development of community-based exhibitions and documentation projects as determined by the students, their families, and teachers. The Museum staff remains committed to developing new and innovative ways to serve at risk youth and will use the Moten project as the core of a its multi-phased youth services program.

Future Development - The Smithsonian Institution remains strongly committed to the continued development of the Anacostia Museum. This unique facility within the system of

national museums provides the public and the profession with a consistent body of innovative, experimental, and substantive work that has significant impact on understanding of the black experience and of the ways in which museums and cultural organizations interact with populations of color. The Museum staff has begun to develop plans for expansion at the current location to increase services to the Museum's resident community and accommodate its growing regional and national constituent populations. Additionally, the Museum has embarked upon two international projects that relate directly to its inner-city location and community focus. The Birmingham (England) Museum of Arts and Science has asked the staff to serve as partners in the development of a community-based outreach unit in Birmingham's Handsworth neighborhood. In conjunction with the Birmingham-based project, and as an outgrowth of the Washington-based Black Mosaic project, the Museum is beginning to examine contemporary community life and art among black communities in major European cities.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Annual allotments support the salary and benefit costs for the director and an exhibits specialist as well as trustee expenses and routine staff business expenditures. Additional funds derived from donations and traveling exhibit rental fees support outreach activities.

Restricted Funds - Gifts and grants are donated for specific projects.

Office of Exhibits Central

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	46	2,245	-	-	-	100	-	-	-	-
FY 1994 Estimate	46	2,283	-	-	-	100	-	-	-	-
FY 1995 Estimate	46	2,283	-	-	-	100	-	-	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Office of Exhibits Central (OEC) is the Smithsonian Institution's single largest exhibit producer, providing Smithsonian organizations with comprehensive exhibition services. OEC is expert in the specialized needs of traveling and temporary exhibitions as well as permanent installations. OEC exhibit specialists form teams with curators and subject-matter experts to prepare exhibitions that meet the highest standards of educational effectiveness and accessibility. The Office's facilities handle many aspects of Smithsonian exhibitions, including design, graphics, model making, and fabrication. The Office is also involved in concept development, object selection, and product research, evaluation, and prototype testing. OEC staff makes recommendations about the need for conservation assistance and conducts training in exhibit design and production.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the Office of Exhibits Central.

PROGRAM - The Office of Exhibits Central is a full-service organization with specialized units in design, editing, graphics, model making, and fabrication.

The Design, Editing, and Graphics Department works with a curator's preliminary ideas to develop an overall exhibition plan. Exhibit designers are responsible for all aspects of visual presentation. OEC's exhibit editors work closely with designers and with subject specialists to ensure that words and design work together to create an effective presentation. The Department also provides illustration services. The Graphics Shop provides silk-screening, typesetting, photograph mounting, conservation matting and framing, and other graphic art services.

The Production Department translates designs into three-dimensional exhibitions. The Model Shop creates scientifically and historically accurate dioramas, models, and mannequins and brackets artifacts for display. It also offers taxidermy services. The Fabrication Shop constructs fine cabinetry and display casework as well as customized crating. Sheet plastics work is a specialty.

The Fabrication, Model, and Graphics shops also install, strike, and pack exhibitions. The designers and production teams of OEC work with installation teams of building tradespeople, art handlers, conservators, registrars, security personnel, lighting specialists, building managers, and others to bring exhibitions to the public.

During FY 1993, OEC completed more than 100 projects, supporting nearly every Smithsonian office and bureau. In FY 1994, OEC anticipates working on an even greater number of exhibitions. A sampling of projects to be completed or in progress in FY 1994 includes:

- OEC will put together a team of specialists to study the feasibility of its designing and producing displays for an additional 12,000 square feet of exhibition space at the new National Postal Museum. OEC produced major models for the Museum's 1993 opening.

- OEC is designing and producing "Before Freedom Came" for the Smithsonian Institution Traveling Exhibition Service (SITES). The exhibition will debut at the Anacostia Museum in December 1993.

- OEC is designing and partially fabricating the "Spiders" exhibition for the National Museum of Natural History. The Model Shop is also producing models and a mannequin for the "Marine Ecosystems" exhibit at the Museum.

- OEC will design and produce "Two Eagles: A Natural History of the Mexico-U.S. Borderlands" exhibit for the Smithsonian Institution Traveling Exhibition Service.

- OEC will design and produce "Crossroads Alaska: Native Cultures of Siberia and Alaska." Staff will make brackets for the 312 objects included in the exhibition and prepare replicas of objects too delicate to travel.

- During FY 1994, OEC will begin a training program for members of the African American Museum Project exhibition staff.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Proceeds from the sale of OEC's book, A Freeze-Dry Manual, through the Smithsonian Institution Press and reimbursements from internal Smithsonian units provide these funds. OEC uses the funds to purchase supplies,

materials, and services in support of OEC activities; to defray costs associated with special events; and to supplement travel expenses.

Smithsonian Institution Traveling Exhibition Service

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	44	2,544	8	361	4	525	-	905	-	2
FY 1994 Estimate	44	2,535	8	378	4	525	-	920	-	2
FY 1995 Estimate	45	2,705	8	378	4	525	-	920	-	2

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Smithsonian Institution Traveling Exhibition Service (SITES) expands the Smithsonian's presence beyond Washington, D.C., by circulating exhibitions to public audiences in museums large and small and in schools, libraries, science centers, historical societies, zoos, aquariums, and community centers. SITES exhibitions reach nearly 11 million people annually in the United States and abroad. A commitment to audience access drives the development of all SITES programs. SITES's top priority is increasing the availability of Smithsonian-created exhibitions among people who cannot see them firsthand by visiting the Institution's museums. Facilitating the sharing of exhibitions created outside the Smithsonian--SITES's second priority--is another way SITES works to respond to diverse program needs and interests.

For FY 1995, SITES requests an increase of 1 workyear and $170,000 to support a registrarial position (1 workyear and $44,000), construct exhibition crating ($61,000), and maintain exhibition transportation ($65,000).

PROGRAM - The Smithsonian Institution Traveling Exhibition Service reconfigures and packages for widespread circulation exhibitions developed by Smithsonian museums and program offices and by institutions and organizations outside the Smithsonian. SITES tailors the form and content of these exhibitions to meet the program needs and technical capabilities of museums and cultural and educational facilities worldwide.

In developing exhibitions for audiences of all ages and backgrounds, SITES strives to do more than present artifacts. SITES exhibitions represent a broad range of human perspectives; they pose questions, communicate abstractions, and challenge visitors to make connections

among objects, people, places, events, and ideas. By emphasizing diverse viewpoints and by using inquiry as a means of interpreting exhibition themes and images, SITES hopes to encourage people to explore the full breadth of possibilities about themselves, others, and the world around them.

Smithsonian Exhibitions - SITES's FY 1995 program will mirror the scope and vitality of the Smithsonian as never before. New traveling exhibitions about spiders, jazz, ocean conservation, Abraham Lincoln, and gospel music are but a small sampling of the diverse subjects through which SITES represents collections and research from the Institution's many museums and program offices. SITES will take a major step forward during FY 1995 in expanding its national audience with a new initiative aimed at bringing the Smithsonian to rural communities. Capitalizing on the widespread enthusiasm that accompanied SITES's poster panel version of the National Museum of Natural History's "Seeds of Change" exhibition, SITES and the National Museum of American History will circulate throughout small-town America a low-cost, easy-to-install exhibition of World War II victory posters. Public libraries and small, resource-poor exhibit centers also will benefit in FY 1995 from traveling versions of major Smithsonian exhibitions, including "Beyond Category: The Musical Genius of Duke Ellington" and "Mechanical Brides," the Cooper-Hewitt Museum's lively presentation of the changing impact of domestic appliances and work equipment on women's lives. These projects aim to give communities too often excluded from national cultural programs the chance to experience some of the Smithsonian's richest exhibit programs.

Exhibition Partnerships - Partnerships with institutions and organizations outside the Smithsonian enable SITES to meet more fully the program needs and interests of the Institution's diverse national audience. In FY 1995, for example, 14 SITES exhibitions will explore facets of the African American experience. Among these 14 exhibitions is "Before Freedom Came," a stirring historical portrait of African American life in the antebellum South created in partnership with the Museum of the Confederacy in Richmond, Virginia.

Together with the Indochina Arts Project, SITES developed and is circulating "An Ocean Apart," the first traveling exhibition in the United States to feature the work of contemporary Vietnamese and Vietnamese American artists. A preparatory workshop for museums on the tour will give participants the opportunity to develop new educational programs and resource guides tailored to Vietnamese American communities, one of SITES's largest emerging constituencies.

The ever-growing roster of English/Spanish exhibitions now available from SITES will be enhanced in FY 1995 with the circulation of "Africa's Legacy in Mexico," a photographic project developed in partnership with artist Tony Gleaton. Collaborative opportunities with the National Museum of the American Indian will begin in FY 1995, as SITES plans traveling exhibitions about the American Indian experience in conjunction with the opening of the new Museum.

In its continuing efforts to reach new audiences, SITES in FY 1995 will partner with national advocacy organizations to circulate "More Than Meets the Eye," a landmark exhibition about sight, visual impairment, and blindness. Responding to the heightened interest in making facilities and programs more accessible to people with disabilities as a result of the Americans with Disabilities Act (ADA), the exhibition underscores the fact that modes of communication and mobility abound and that accommodations made for people with disabilities make public programs of all kinds more accessible to everyone.

SITES is a high-visibility outreach arm of the Smithsonian. Its more than 100 exhibitions tour museums and cultural centers in all 50 states. SITES hopes that its expanded visitor base in FY 1995 will enable more Americans than ever before to experience the rich variety of exhibition programs available from the Smithsonian.

EXPLANATION OF PROGRAM INCREASE:

Registrarial Staff Support (1 workyear and $44,000) - This request is for an additional registrar to bolster SITES's ability to meet its commitments to museums of all types and sizes, and to provide more of the specialized technical services needed to circulate high-value Smithsonian art exhibitions.

Exhibition Crating ($61,000) - This request is for additional funds to construct and outfit shipping crates designed to withstand the rigors of long-term travel.

Exhibition Transportation ($65,000) - This request is for support for shipping subventions to enable SITES to maintain its commitment to the widest possible range of cultural institutions.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - SITES's annual operating budget comes partly from rental fees collected from museums and other recipients of traveling exhibitions. These fees, supplemented by an allotment, support design and production, publications, materials, outside specialists, contractual services, and the salaries and benefits of 12 employees.

Restricted Funds - Individuals, organizations, and corporations donate gifts and foundation grants for specific SITES projects. During FY 1993, SITES received support from the Environmental Protection Agency for "Rotten Truths (About Garbage)"; from the Nature Conservancy for "Two Eagles"; from Credit Lyonnais for "L'Ecole Lyonnaise"; and from the Lila Wallace-Reader's Digest Fund for "America's Jazz Heritage," a ten-year initiative aimed at bringing jazz to public audiences across the Nation.

PUBLIC SERVICE AND EXTERNAL AFFAIRS

Assistant Secretary for Education and Public Service

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	6	410	5	265	-	-	-	6	-	-
FY 1994 Estimate	6	415	5	283	-	-	-	6	-	-
FY 1995 Estimate	6	415	5	283	-	-	-	6	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Office of the Assistant Secretary for Education and Public Service (OASEPS) provides administrative and programmatic support for initiatives that advance the Institution's objectives in education, research, and documentation of living cultures; facilitation and advocacy of cultural diversity; the development of wider audiences; and celebrations focused on the achievements and contributions of women's and ethnic minority groups. The Office advises Smithsonian management on public service policy issues in the central planning, development, and oversight of all education and public service programs and activities of the Institution. This line-item includes the Wider Audience Development Program (WADP), which advises and assists Smithsonian managers on policy issues as they relate to minority audience participation in exhibitions and other public programs.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the Office of the Assistant Secretary for Education and Public Service.

PROGRAM:

I. Office of the Assistant Secretary for Education and Public Service - The Office of the Assistant Secretary for Education and Public Service (OASEPS) focuses on the critical issues of education, cultural diversity and cultural equity. The Office and the units it oversees serve as central channels for the diffusion of educational information and assistance programs inside and outside the Institution. They disseminate information on the Smithsonian to broad national audiences, plan and execute formal and informal educational outreach efforts, and engage in research and documentation of living cultures. The Office serves as primary liaison for the Smithsonian Early Enrichment Center and the Smithsonian Cultural Education Committee.

The Office maintains liaison with the Smithsonian African-American Association, Asian-Pacific American Heritage Committee, Latino Working Committee, American Indian Council, and other internal and external ethnic and advocacy committees, and collaborates with Smithsonian bureaus, offices, and other assistant secretaries to develop and execute outreach programs that bring diverse cultural communities and professional sectors to the Institution. The offices reporting to the Assistant Secretary include the Wider Audience Development Program, the Center for Folklife Programs and Cultural Studies, the Office of Elementary and Secondary Education, and the National Science Resources Center.

In May 1993, a comprehensive review of the Smithsonian's educational activities was completed with submission of Smithsonian Education: Statement of Purpose and Goals to the Board of Regents. The review, carried out under the direction of the Assistant Secretary for Education and Public Service, included extensive discussions with every Smithsonian office and bureau with educational responsibilities.

During FY 1993, the Office coordinated numerous events that underscore the Smithsonian's commitment to education. In the spring of 1993, for example, the Office honored recipients of undergraduate scholarships from a multi-cultural Washington, D.C., public high school. In the summer of 1993, the Office co-sponsored, with the Office of Fellowships and Grants, a briefing for Latino and American Indian interns at the Smithsonian and other institutions. The Office also gave support to the Council of Bureau Directors in the first Smithsonian "Town Meeting on Education."

II. Wider Audience Development Program - The Wider Audience Development Program (WADP) coordinates initiatives throughout the Institution to promote cultural diversity and equity. WADP plans federally-designated observances of ethnic and women's heritage and other special events. The Program also provides technical assistance to Smithsonian bureaus and offices to strengthen ties with nontraditional audiences and conducts local and national outreach to culturally diverse groups. WADP serves as the primary liaison with the Smithsonian Cultural Education Committee and staff advocacy groups in their efforts to enhance the presence and presentation of underserved communities.

During FY 1993, 20 public programs were produced to enhance the Institution's knowledge of and contact with diverse audiences that constitute the American public. Examples include an address by Antonia Hernandez, board member of the Los Angeles-based Latino Museum of History, Art and Culture and president/general counsel of the Mexican American Legal Defense and Education Fund (MALDEF), on her vision for this new museum and its significance for the Latino community; a speech by Navajo Nation President Peterson Zah on environmental issues facing Native Americans; an address by University of California at Berkeley Professor Dr. Elaine Kim on feminism, nationalism, and the Asian American literary voice; and a concert that showcased female musicians from the Washington metropolitan area. On occasion, the Office of Equal Employment and Minority Affairs and other organizational units have provided funds to support these pan-Institutional observances.

NONAPPROPRIATED SOURCES OF FUNDING:

I. Office of the Assistant Secretary for Education and Public Service:

Unrestricted General and Special Purpose Funds - An annual allotment provides for the salary, benefits, and support costs of four staff members assigned to the immediate Office. A special purpose fund provides funding for the Educational Outreach Program, which supports innovative and experimental education programs that demonstrate thoughtful approaches and creative methods for inclusion of diverse audiences, especially traditionally underserved groups. While the projected expenditures appear under this Office, the actual expenditures appear under the recipient organizations.

II. Wider Audience Development Program:

Unrestricted General and Special Purpose Funds - An annual allotment provides salary and benefits for a program specialist and support costs for wider audience initiatives, including the Smithsonian Cultural Education Committee, which fosters the inclusion of diverse cultural expertise in research, collections, exhibitions, educational programs, and staff in senior and administrative positions.

Restricted Funds - In FY 1993, WADP will receive the third and final installment of a three-year grant from the Kellogg National Fellowship Program. The grant will allow the WADP Director to complete independent research in selected areas, purchase needed equipment, and attend required conferences and seminars.

Center for Folklife Programs and Cultural Studies

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	14	1,255	15	822	1	275	-	150	-	700
FY 1994 Estimate	12	1,065	15	854	1	275	-	150	-	750
FY 1995 Estimate	12	1,210	15	854	1	275	-	150	-	750

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Center for Folklife Programs and Cultural Studies conducts scholarly research and public programs that promote the understanding and continuity of grass roots regional, ethnic, minority, tribal, and occupational cultures both in the United States and abroad. The Center performs research in collaboration with academic and community scholars and maintains the Folkways Archives and Collections. It also produces the annual Festival of American Folklife; Smithsonian/Folkways Recordings; documentary films, videos, and print publications; training programs and educational materials; and museum and traveling exhibits. The Center cooperates with Federal and state agencies to advance the Nation's interest in cultural matters.

For FY 1995, the Center for Folklife Programs and Cultural Studies requests an increase of $145,000 for infrastructure services for the Festival of American Folklife ($125,000) and archival preservation ($20,000).

PROGRAM - The Center for Folklife Programs and Cultural Studies engages in cultural research conducted by a core staff of scholars in collaboration with scores of public sector, academic and lay scholars from across the United States and around the globe. Research work is then turned into a range of products for dissemination to a broad public. These products include the annual Festival of American Folklife; Smithsonian/Folkways Recordings; documentary films, videos, and print publications; conferences and symposia; training programs; educational materials; and museum and traveling exhibits. The Center also maintains the Folkways Archives and Collections.

Research - Research projects study the continuing practice of local grass roots traditions among diverse cultural communities in contemporary society. Major current projects examine the relationship between culture and grass roots economic development, cultures of immigrants to the United States from the former Soviet Union, the traditions of Cape Verdean Americans and other African immigrants, the changing musical "soundscape" of American Indians, the emerging culture of the U.S.-Mexico borderlands, and folklife in the Bahamas, Thailand, and Jerusalem. Center scholars and fellows pursue research on American regional musics, Indian lacrosse, African narrative, the cultural impact of technological change, urban U.S. Latino culture, and African American dance.

Festival of American Folklife - The Festival of American Folklife, held annually on the National Mall since 1967, educates a broad public to human cultural diversity and encourages tradition bearers by giving national recognition to their artistry, knowledge, and wisdom. The Festival has provided a national and international model for the research-based presentation of cultural traditions. The 1993 Festival featured programs on U.S.-Mexico borderlands, American social dance, music in the metropolitan Washington area, and children's folklore. Some 600,000 visitors attended the five-day Festival; millions more were reached by media coverage.

In 1994, Festival programs are being planned on culture and development, the American musical heritage, the Bahamas, Thailand, and possibly Jerusalem. Future programs are being planned on the 50th anniversary of World War II, Cape Verde and Cape Verdean immigrants to the United States, the American South, Iowa, and on the cultural traditions of the Smithsonian itself.

Traveling Exhibits - The Center produces modest traveling exhibits developed from research and Festival programs. Current exhibits include "The Grand Generation" on the folklore of the elderly, "Stand by Me" on African American urban life, and "Taking to the Streets" on Latino urban identity. In 1993, the Center will produce "Making the White House Work." Based upon a 1992 Festival program on the occupational culture of the White House domestic staff, the exhibit will be mounted in Presidential libraries with the cooperation of the National Archives. A traveling exhibit on Maroon cultures is being developed with the collaboration of the Smithsonian Institution Traveling Exhibition Service.

Educational Programs and Materials - The Center develops curriculum materials and offers teacher training for understanding American cultural traditions. Teacher and student guides, recordings, and videotapes on Woody Guthrie, Leadbelly and American folk music were developed in cooperation with the Music Educators National Convention. The Center has completed work with the U.S. Virgin Islands Department of Education on folklife materials growing out of a Festival program in 1990 and with various other school systems on American Indian cultures, African American Maroon cultures, and the cultures of the U.S.-Mexico borderlands growing out of Festival programs in 1991, 1992, and 1993. The Center also uses its Summer Folklore Institute as a training ground for community scholars and annually hosts some two dozen interns from American universities.

With support for an educational specialist in 1993, the Center has been able to develop plans for creating cultural education materials appropriate for the classroom and for programs that encourage students to conduct cultural research and design their own school-based museums and festivals.

Publications and Documentary Films - The Smithsonian Folklife Studies series consists of scholarly monographs coupled with documentary films, generally released to colleges and universities and also seen on public television. Other books, such as the Smithsonian Folklife Cookbook, reach broad audiences. The Center produces Academy and Emmy Award-winning documentary films, such as The Stone Carvers. The Korean Onggi Pottery film won a Cine Golden Eagle in 1993. A current film project examines the transnational character of Muslim culture, tracing the history of a holiday celebration from the Middle East to India and then to the Caribbean and to New York City.

Smithsonian/Folkways Recordings - Folkways produces documentary recordings of American and worldwide music, performance, and verbal arts. Recordings are made in the field and at the Festival. "The Roots of Rhythm and Blues," recorded at the Festival, was nominated for a Grammy Award in 1993. Recent releases on Cowboy songs, Chippewa traditions, the music of Indonesia, Armenian American music, and children's songs indicate the breadth of subject matter. Recordings take the form of compact discs, cassettes, videos, and even computer discs with booklets and/or liner notes. Recordings are distributed to general audiences, and children's and educational recordings reach classrooms across the Nation. Archival and scholarly recordings, such as the recently released Mahalia Jackson album accompanying an Oxford University Press book, serve researchers. Major current projects include American Indian recordings, a world music and dance video encyclopedia, collaboration on educational computer software projects, including a multi-media encyclopedia of musical instruments, and a Ford Foundation-sponsored series on Indonesian music. Future projects include a Music of Americas series, instructional videos of traditional guitar, banjo, and mandolin styles, and a multi-media computer-based encyclopedia of American culture.

Archives and Collections - The Folkways Archives contains audiotapes, records, videotapes, photographic images and film, and paper files documenting folklife traditions from all parts of the United States and most regions of the world. Among holdings are the original master tape of Dr. Martin Luther King, Jr.'s "I Have a Dream" speech and the original handwritten lyrics and master tape of Woody Guthrie performing "This Land Is Your Land." Highlights include American and world music and documentation of occupational lore, family folklore, immigration stories, and a variety of ethnic and regional performance traditions.

Public Service - The Center collaborates with states to develop Festival programs and remount them "back home." Recent projects with Hawaii, Michigan, New Mexico, and the U.S. Virgin Islands also extend to the development of educational materials and the sharing of archives. In 1993, the Center will work closely with New Mexico State University to remount the Festival program in Las Cruces and with the University of Texas and Chamizal National Memorial to remount the borderlands program in El Paso. The Center also works with the

National Endowment for the Arts, the National Endowment for the Humanities, and the Library of Congress to develop ways of conserving America's cultural heritage.

EXPLANATION OF PROGRAM INCREASE:

Festival of American Folklife Infrastructure ($125,000) - This request is for infrastructure services formerly offered free of charge by, among others, the National Park Service, and the Red Cross.

Archival Preservation ($20,000) - This request is to preserve rapidly decaying sound, film, and video recordings and manuscripts in the Folklife and Folkways Archives, including the original handwritten lyrics and master tape of Woody Guthrie performing "This Land Is Your Land," the original master tape of Dr. Martin Luther King, Jr.'s "I Have a Dream" speech on the National Mall, and rare historical recordings of various American Indian musical performances, southern Black gospel music, cowboy songs, Cajun music, labor music, and other genres.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Trust fund allotments, along with a return from concessions at the Festival of American Folklife, provide funds that help support personnel costs, program costs, research, and development costs of the Festival. Sales of the Folkways records help to support production and archival fulfillment costs for Smithsonian/Folkways Recordings. The Smithsonian Educational Outreach, Special Exhibition, Research Opportunities, and International Exchange Programs help support educational projects, museum exhibitions, travel to scholarly meetings, and international research.

Restricted Funds - Grants and gifts from foundations, corporations, and individuals provide funds in support of Festival programs, Smithsonian/Folkways Recordings, and other projects. In FY 1993, the Ford Foundation supported a planning meeting at the Center for cultural archivists from around the world; the Cummings and Mott Foundations supported research in Jerusalem; and the Texas Commission on the Arts supported programming at the Folklife Festival.

Government Grants - Various state and local governments provide these funds to support programs at the Festival of American Folklife. Federal agencies and foreign governments may enter into agreements for cooperative programs. In FY 1993, the Mexican government, through various academic and cultural organizations, helped support the borderlands program at the Festival. Commitments for the 1994 Festival have been made by Thailand, the Bahamas, and the Inter-American Foundation to support local costs associated with those programs.

Academic and Educational Programs

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	13	777	6	492	-	39	-	34	-	10
FY 1994 Estimate	13	777	6	508	-	-	-	-	-	-
FY 1995 Estimate	13	777	6	508	-	-	-	-	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - Research and education are among the principal objectives of the Smithsonian. To attain these goals, the Institution promotes scholarly and academic ties with other learned institutions and offers resources to the general public as well as the academic community. Scholarly and academic ties develop and flourish through programs in higher education, outreach, and learning opportunities at the elementary and secondary levels. This line-item includes the Office of Elementary and Secondary Education (OESE) and the National Science Resources Center (NSRC).

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the offices included in the Academic and Educational Programs.

PROGRAM:

I. Office of Elementary and Secondary Education - The Office of Elementary and Secondary Education is the Smithsonian's central office for educational initiatives at the pre-kindergarten through 12th-grade levels. The Office draws on resources from across the Institution to create materials and programs that address the needs of school teachers and administrators, as well as students, in the Washington, D.C., area and nationwide. It also serves as a clearinghouse of information about Smithsonian educational materials and programs and develops frameworks for communication and collaboration among Smithsonian education units and between those units and outside educational organizations. In addition, OESE represents the Institution on the Federal Coordinating Council on Science, Education, and Technology's Committee on Education and Training.

An important goal of the Office is to educate young people and their teachers about the value of museums and related institutions (such as historic sites, science centers, and zoos) as learning resources. The Office seeks to expand the use of these resources, and the primary source materials they contain, as learning tools. Involving collaboration with schools, school systems, universities, and other museums, these efforts reach thousands of teachers and millions of students each year in communities across the country.

Central to Institution-wide efforts to help address critical problems in the Nation's schools, OESE programming is designed to give students practice in asking questions, in determining where and how to seek the answers, in formulating and testing hypotheses from direct evidence, and in articulating the results of their inquiry. Textbooks do not provide this kind of practice, and few classroom teachers have the time, expertise, or resources to shape these experiences for their students. Thus, the Office seeks to fill an important need by bringing together scholars, teachers, and appropriate outside experts to create materials and programs based on Smithsonian collections that are not only rich in content but that teach students how to think. Further, through its teacher education programs, the Office models these teaching methods so that classroom teachers can use them with their students.

The Office of Elementary and Secondary Education's programs include:

- Professional Development for Teachers: Workshops, courses, conferences, symposia, and internships for Washington metropolitan area teachers are offered in collaboration with the Smithsonian Institution museums. In communities nationwide, regional workshops and summer institutes presented in collaboration with national and regional organizations improve teachers' content knowledge and pedagogical skills and strengthen ties between museums and school systems by acquainting teachers with the learning resources of their local museums. Approximately 2,000 teachers were reached through these programs in FY 1993.

- Curriculum Materials for Schools: OESE's quarterly journal for elementary school teachers, Art to Zoo, reaches approximately 90,000 teachers in 20,000 schools. The Office also produces multi-media kits targeted to students and teachers at different grade levels and a range of materials based on the Office's conferences and symposia. In FY 1993, a curriculum package on using museums to teach writing drew upon a number of Smithsonian exhibitions; copies were sent to more than 15,000 high school teachers nationwide. The second in a series of multi-media curriculum kits developed by OESE for high school teachers was published. Incorporating facsimile documents, an audiotape, and a teacher's guide, the kit examines "The Blues Tradition" in a way that can be applied to classroom studies in American history.

- Programs and Materials for Children and Teenagers: OESE conducts national and local internship programs for high school students and produces books,

computer software, and other educational materials for children of various ages. For example, in FY 1993, the Office worked with outside publishers to produce a series of educational collecting cards based on Smithsonian collections and an educational computer game, "Mystery at the Museums."

- Clearinghouse Services: OESE provides information about Smithsonian-wide educational materials and programs that are available to schools and teachers nationally. In FY 1993, the Office coordinated a pan-Institutional service on a commercial computer network with more than a quarter million subscribers nationwide.

II. National Science Resources Center - The National Science Resources Center (NSRC) is a joint effort of the Smithsonian Institution and the National Academy of Sciences to improve the teaching of science in the Nation's schools. NSRC serves as a dissemination center to provide teachers, science educators, and scientists with current information about science teaching resources, program improvement strategies, and sources of expertise and assistance. NSRC also develops innovative science curriculum materials and sponsors outreach activities to focus attention on important issues in science education, encourage the sharing of exemplary materials and programs, introduce new teaching methods and technologies, and develop the leadership needed to bring about science curriculum reform at the local level.

All NSRC programs stress the involvement and collaboration of teachers and scientists and place a special emphasis on increasing the numbers of underrepresented minorities and women engaged in the study of science. Oversight of the NSRC's programs is provided by an Advisory Board appointed by the Smithsonian and the National Academy of Sciences that includes eminent scientists, executives from several major U.S. corporations, and educational leaders from across the country.

Because there is a special need to increase the scientific and technological literacy of young children, NSRC has undertaken several projects to improve the teaching of science in the Nation's elementary schools. NSRC, through its Information Dissemination Program, has developed a comprehensive collection and information data base of elementary science teaching resources. NSRC has published a resource guide based on this data base, entitled Science for Children: Resources for Teachers. In addition to information about the materials in the elementary science resource collection, the guide includes a directory of science museums and other organizations across the country that provide science teaching resources and assistance to elementary school teachers. More than 50,000 copies of Science for Children: Resources for Teachers have been disseminated to science educators and scientists.

Science and Technology for Children (STC) is a NSRC elementary science curriculum development project that is developing a complete science program for grades 1-6. Focused on topics in physical science, life science, earth science, and technology, the STC curriculum units use simple, inexpensive materials to teach science and link science to the broader elementary school curriculum of mathematics, reading, writing, art, and social studies. STC program

materials have been field-tested in 58 school districts in 34 states, the District of Columbia, and Department of Defense Dependents Schools overseas.

NSRC has also undertaken a large-scale project, the National Science Education Leadership initiative (NSEL), to engage educators and scientists in a concerted and sustained effort to improve the teaching of science in the Nation's elementary schools and to increase the access of all students to effective elementary science instruction. NSEL sponsors leadership institutes to prepare teams of teachers, science supervisors, school system administrators, and scientists to spearhead efforts to improve elementary science education in their school districts. These institutes help school systems design effective in-service education programs, establish science materials support systems for teachers, and develop the community support needed to improve their science programs.

Participation in NSEL's Elementary Science Leadership Institutes now totals 106 school district leadership teams from 39 states, the District of Columbia, Canada, and Mexico. Together, the U.S. school districts that have participated in the NSRC Elementary Science Leadership Institutes serve more than two million elementary school children, about 10 percent of the Nation's children in kindergarten through grade 6. Thirty-two percent of the 106 school districts that have participated in the Leadership Institutes have minority enrollments that are greater than 50 percent.

Through the NSEL initiative, NSRC also provides technical assistance to school districts across the country that are working to reform their elementary science programs. In addition, NSEL is enabling the NSRC to sponsor a series of working conferences to help scientists and engineers become effectively involved in the improvement of science education in the schools. The first two NSRC Working Conferences on Science Education in the Schools were attended by 67 scientists and engineers from universities, industrial corporations, museums, and government laboratories.

NONAPPROPRIATED SOURCES OF FUNDING:

I. Office of Elementary and Secondary Education:

Unrestricted General and Special Purpose Funds - OESE's internship programs for young people are supported by annual allotments. Trust funds also support OESE's publications program as well as its outreach efforts to underserved populations. In addition to producing a series of curriculum kits for teachers, the Office is working on a series of Art to Zoo books for children and with Smithsonian Institution Press to produce a children's guide to the Smithsonian.

Restricted Funds - Corporate and foundation grants support OESE efforts for teachers. For example, in FY 1993, a grant from Brother International Corporation supported the development, publication, and distribution of a Resource Guide for Teachers and a curriculum kit on teaching writing using museums. Grants from the Pew Memorial Trust and an

anonymous donor funded a community-based teacher development program in collaboration with the National Faculty for Humanities, Arts, and Sciences. The National Faculty is an independent, non-profit organization whose goal is to build permanent bridges between schools, colleges, and universities. A grant from the California Council on the Humanities supported an outreach effort for schools and museums in collaboration with the Smithsonian Associates' programs in that state.

Government Grants and Contracts - A grant from the District of Columbia Public Schools supports a museum-based professional development program for its teachers.

II. National Science Resources Center:

Unrestricted General and Specific Purpose Funds - An allotment from unrestricted funds provides partial funding for the core operations of the National Science Resources Center. These resources provide support for salaries and the core support necessary to develop, with the assistance of the National Academy of Sciences, program initiatives to attract further support from the private sector.

Assistant Secretary for External Affairs

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	10	714	48	2,858	-	428	-	540	-	11
FY 1994 Estimate	10	720	46	2,851	-	423	-	503	-	11
FY 1995 Estimate	12	827	46	2,851	-	423	-	503	-	11

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Office of the Assistant Secretary for External Affairs (OASEA) was established in 1988 to coordinate the Institution's external affairs activities and advise the Secretary and senior management officials on membership policies and programs, media activities, visitor information, and issues affecting the Institution's public activities and their impact on external constituencies, both national and international. This line-item includes the immediate Office of the Assistant Secretary for External Affairs; the Office of Telecommunications (OTC), which produces programs for radio, film, and television relating to a wide range of Smithsonian activities; the Visitor Information and Associates' Reception Center (VIARC), which provides and coordinates Institution-wide information and assistance programs for the public, Smithsonian Associate members, Smithsonian staff, and volunteers; and the Office of Special Events and Conferences, which provides and coordinates special events and conference-planning services sponsored and co-sponsored by the Smithsonian Institution.

For FY 1995, OASEA requests an increase of 2 workyears and $107,000 to provide for information receptionists (2 workyears and $60,000), operating support for the Smithsonian Information Center ($30,000), and maintenance of the exterior graphic information system ($17,000) for VIARC.

PROGRAM:

I. Office of the Assistant Secretary for External Affairs - The Office of the Assistant Secretary for External Affairs focuses on matters relating to the Institution's many external constituencies and their needs and concerns. The Office oversees the Institution's impact beyond the National Mall through supervision of its component units individually and

collectively, through its own outreach efforts, and through addressing the role of the Smithsonian in national and international affairs. The offices reporting to the Assistant Secretary include the Office of Telecommunications; the Visitor Information and Associates' Reception Center; the Office of Special Events and Conferences; the Smithsonian Institution Press; the Office of International Relations; and The Smithsonian Associates.

In FY 1993, the Office took responsibilities for coordinating planning for the Institution's 150th anniversary celebration in 1996 and formulating an electronic media policy for the Institution within the framework of a pan-Institutional Electronic Media Board.

II. Office of Telecommunications - The Office of Telecommunications collaborates with Smithsonian research and professional staff to produce radio, film, and television programs relating to a wide range of the Institution's activities. Through national and international distribution, these programs expand the Institution's audiences and support its outreach objectives.

In FY 1993, OTC produced a variety of videos for exhibitions in the museums and for traveling exhibitions. Notable among these were two video productions for "Beyond Category: The Musical Genius of Duke Ellington," at the National Museum of American History. One was a 15-minute video focusing on Ellington's talents as composer, arranger, and bandleader and featuring artists Wynton Marsalis, Quincy Jones, Louie Bellson, and Clark Terry. The other is an interactive kiosk presenting multiple programs on the great musicians of Ellington's band. After its run at the Museum, this exhibition and its accompanying videos will tour for three years, concluding at the Atlanta Olympics in 1996. Also for the National Museum of American History, OTC is overseeing production of three new videos relating to the "American Encounters" exhibition. For educational distribution throughout New Mexico and elsewhere, they look at "Life in a Small Town," "The Lowriders of New Mexico," and "Frito Pie," exploring food, nutrition, agriculture, and land use among Pueblo tribes.

For a 1994 exhibition at the National Portrait Gallery, OTC produced a series of vignettes of World War II journalists, featuring new interviews with John Hersey, Bill Mauldin, William Shirer, Bernard Perlin, and Robert St. John.

In the expanding area of multi-media, the Office completed "The Downhome Blues," the latest in a series of Smithsonian compact disc-interactive programs produced in collaboration with Philips Interactive Media of America (PIMA). Created with help from Smithsonian/Folkways Recordings and the National Museum of American History, the disc holds a jukebox of 40 rural blues songs, a demonstration by top musicians on what makes the blues the blues, and a 20-minute documentary on the origins of blues and regional styles. PIMA plans to release the disc in late 1993.

OTC also provided guidance on production of several exhibition videos for the National Museum of Natural History: a program on food webs for the "Marine Ecosystems" exhibition,

four short videos for the upcoming "Spiders" exhibition, another for "Ocean Planet," and a 15-minute previsit program for schoolchildren focusing on the museum's Insect Zoo.

OTC's hour-long film, "Dream Window: Reflections on the Japanese Garden," the recipient of nine major film festival awards from both national and international competitions during FY 1993, had important screenings at venues such as San Francisco's Asian Art Museum, the National Gallery of Art, and several Japan-America Societies around the country, as well as national broadcasts over PBS in the United States and NHK-TV in Japan.

Filming began in April 1993 in Mali for "The Elephants of Timbuktu," one of three "Smithsonian Expedition Specials" being produced by Hearst Entertainment in coordination with OTC. The series will debut on the Arts and Entertainment cable network in 1994. Filming also took place in Indonesia for a second program, focusing on the work of Paul Taylor at the National Museum of Natural History, who is studying the isolated Korowai people deep in the province of Irian Jaya.

OTC's Marketing Department mounted a major campaign for three radio series at the annual Public Radio Conference in Washington, D.C. To generate interest among program directors, Radio Smithsonian jointly sponsored several events during the conference: a dance and concert recording at the Barns of Wolf Trap to promote "Folk Masters"; a Smithsonian Jazz Masterworks Orchestra gala concert to announce the new "Jazz Smithsonian" series; and a discussion on "Security and the Single Superpower" featuring Jeane Kirkpatrick, Ronald Steel, and Jim Hoagland, to be broadcast on "Dialogue," co-produced with the Woodrow Wilson International Center for Scholars. "Folk Masters" received another Gold Award from the Corporation for Public Broadcasting for the second year running, this time for outstanding technical achievement.

In partnership with WETA-FM, Radio Smithsonian taped the third season of "Folk Masters" at Wolf Trap, for nationwide broadcast in the fall. Production also began for "Jazz Smithsonian," set to premiere over American Public Radio in January 1994.

OTC and The Smithsonian Associates (TSA) began exploring programming, financial, and marketing options for a possible Smithsonian Campus on the Air. This project is envisioned as an "electronic campus," recreating and disseminating the Smithsonian to viewers across America and the world using current and emerging technologies (cable, videocassette, satellite, and interactive disc). The project conducted a marketing survey with the help of a James Smithson Society grant and commissioned an initial business plan. TSA and OTC are now seeking funding, identifying compatible business partners, and continuing research and development, with the goal of creating pilot programs in FY 1994.

III. Visitor Information and Associates' Reception Center - The Visitor Information and Associates' Reception Center is a multi-faceted central information and support organization responsible for the following major activities, some of which operate seven days a week: the Smithsonian Information Center, the Institution's primary orientation and information facility

for visitors; the Public Inquiry Mail and Telephone Information Service, the Smithsonian's central information and referral point for public correspondence and phone inquiries; the Museum Information Desk Program, through which volunteers are trained and scheduled to staff information desks in most of the Institution's Washington D.C. metropolitan area museums; the Castle Docent Program, through which tours of the Smithsonian Institution Building are conducted; the Behind-the-Scenes Volunteer Program, a registration and placement activity for volunteers working in independent projects; a Previsit Education Program, which provides the principal Smithsonian interface with the local, national, and international tour and travel industry; an Exterior Graphic Information System, through which outdoor directional assistance is provided to visitors; and an Information Resources Division, which maintains computer-based information systems and produces the variety of printed reference materials, information aids, and publications that support all VIARC public information activities and service programs.

In recognition of 23 years of public service activities, VIARC received the 1993 Public Employees Roundtable Award for Excellence in Public Service in the Federal category.

The Smithsonian Information Center has served more than 6 million visitors since opening in late 1989. Open daily at 9:00 a.m., the Center offers two orientation theaters featuring an award-winning, 20-minute video overview of the Institution; interactive touch-screen video programs on the Smithsonian in seven languages; scale models of Washington's monumental core; electronic wall maps and interactive touch-screen programs highlighting popular Capital attractions; printed guides in seven languages; and volunteer information specialists to answer questions and provide direction. Both the theater and interactive programs were updated in FY 1993 to include the reopening of the Freer Gallery of Art and the opening of the National Postal Museum. The electronic maps were also updated to include Smithsonian and city-wide changes. In addition, a new kiosk presenting an overview of the Institution's research activities was added to the Center.

A corps of almost 700 volunteer information specialists provides visitor assistance seven days a week at museum information desks and the Smithsonian Information Center. These volunteers also answer the Institution's public inquiry phone lines providing information to callers from across the nation and around the world. In FY 1993, two new information desk sites were added, one at the Freer Gallery of Art and one at the National Postal Museum, bringing the total to 18 desks in 14 buildings. Efforts to provide automated information retrieval systems to all information desks proceeded during the year. When completed, these systems will save considerable staff time and ensure that the public is provided with the most current and accurate information possible. As a result of recruitment efforts to broaden the cultural diversity of the volunteer corps, 21 percent of all new volunteer information specialists in FY 1993 consisted of minority constituencies.

The Castle Docent Program continued to offer tours of the Castle Friday through Sunday, with tours of the Enid A. Haupt Garden added during the spring and fall months.

Tours of the Castle in Spanish became a regular monthly feature in FY 1993, and during Hispanic Heritage Month they were offered weekly.

Automated office systems in the Public Inquiry Mail and Telephone Information Service continue to streamline response to mail and telephone inquiries. In FY 1993, some 34,591 pieces of correspondence and 249,882 telephone inquiries were handled by VIARC staff and volunteers through June. To assist the public, daily Dial-a-Museum and Skywatcher recordings were supplemented by recordings on ethnic celebrations and Institutional events as well as a recorded events line in Spanish produced by the Office of Public Affairs. Additionally, VIARC continues to promote previsit education through active participation in local, national, and international tour and travel industry marketplaces, meetings, and conferences. In FY 1993, VIARC began providing on-line information about Smithsonian exhibitions and activities to tour and travel operators nationwide through a computerized subscription service and expanded on-line information opportunities to the public through new Institutional ventures with commercial computer networks.

The Information Resources Division's upgraded software programs and enhanced graphics capabilities have contributed to the increased efficiency and productivity of this VIARC unit, whose regular publications include monthly pan-Institutional Calendars of Events and Exhibitions Directories. In FY 1993, the Division began posting its listing of current exhibitions to the Smithsonian electronic mail system, providing Institution-wide access. The Division is also busy reformatting all VIARC publications to conform with new accessibility guidelines and is engaged in the myriad of details required to update the Smithsonian Information Center's interactive components.

The Behind-the-Scenes Volunteer Program continues to register, recruit, and place volunteers throughout the Institution in diverse independent projects and translation activities. Some 442 volunteers were registered and placed in FY 1993, and 183 documents were translated for Smithsonian staff.

IV. Office of Special Events and Conferences - Under the Institution's Restructuring Plan, the Office of Special Events and the Office of Conference Services merged during FY 1993. The Office arranges luncheons, receptions, and dinners associated with exhibition and museum openings, seminars, lectures, and meetings sponsored and co-sponsored by the Institution. It also provides expertise to Smithsonian bureaus and offices on issues of domestic and international protocol.

In addition, the Office plans and coordinates the logistical arrangements for Smithsonian-sponsored seminars and conferences initiated by Smithsonian scholars and staff. The Office functions as a clearinghouse for information on off-campus and on-campus conference facilities and support services and maintains a strong network with Washington-based conference support organizations.

During FY 1993, the Office received, screened, and answered nearly 1,000 requests for special events and conferences. The Office also produces a monthly Special Events Calendar and a quarterly Conference Calendar of future conferences for Institution-wide distribution.

EXPLANATION OF PROGRAM INCREASE:

Visitor Information and Associates Reception Center:

Supervisory Information Receptionists (2 workyears and $60,000) - This request is for two additional supervisory information receptionists (building coordinators) to help the Visitor Information and Associates Reception Center improve the quality of information services provided to the public seven days a week at 18 museum information desks.

Smithsonian Information Center Repairs and Service Contracts ($30,000) - Requested funds will provide necessary contractual support of automated systems and replacement of furnishings to maintain full operation of the Smithsonian Information Center, which has serviced over 6 million visitors since it opened in late 1989.

Outdoor Graphic Information System ($17,000) - Requested funds will support the continuation of VIARC's exterior graphic information system (10 outdoor color-coordinated information/orientation pylons), which provides basic Smithsonian information and wayfinding assistance to millions of visitors each year.

NONAPPROPRIATED SOURCES OF FUNDING:

I. Office of the Assistant Secretary for External Affairs:

Unrestricted General and Special Purpose Funds - An annual allotment provides for the salaries, benefits, and support costs for the immediate office.

Restricted Funds - Individual gifts and grants from private foundations and corporations provide funds for specific research programs.

II. Office of Telecommunications:

Unrestricted General and Special Purpose Funds - An annual operating allotment provides for salaries, benefits, and costs associated with the production of educational and informational materials for the electronic media. The sale of film, video, and audio programs provides additional funds.

Restricted Funds - Individual gifts and grants from private foundations and corporations provide these funds, used by OTC for specific programs. In FY 1993, a consortium of Japanese companies, including Kajima Corporation, Hitachi Limited, and the American Family Life Assurance Company, provided grants for the marketing and distribution of a major film on

Japanese gardens. Funds from the Lila Wallace-Readers' Digest Fund and the Ruth Mott Fund supported production of the radio series, "Folk Masters," featuring live performances of a wide range of traditional music. The Lila Wallace-Readers' Digest Fund also provided funding for the "Jazz Smithsonian" radio series and for production of video materials in the exhibition, "Beyond Category: The Musical Genius of Duke Ellington." The National Association of Housing Educators, the Lyndon B. Johnson Foundation, and the Women's Committee of the Smithsonian Associates provided grants for the development of a proposed television series on historic American homes called "If This House Could Talk . . .". Funding from the Corporation for Public Broadcasting supported production of two radio specials following up on the OTC series, "Spirits of the Present: The Legacy from Native America."

III. Visitor Information and Associates' Reception Center:

Unrestricted General and Special Purpose Funds - Annual operating allotments support the Smithsonian Information Center and VIARC's work as the public service office responsible for Institution-wide information and assistance activities.

IV. Office of Special Events and Conferences:

Unrestricted General and Special Purpose Funds - Annual operating allotments provide for the salaries, benefits, and support costs for this Office.

Smithsonian Institution Press

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	30	1,500	41	16,599	-	-	-	-	-	-
FY 1994 Estimate	30	1,544	41	23,057	-	-	-	-	-	-
FY 1995 Estimate	30	1,544	41	22,129	-	-	-	-	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Smithsonian Institution Press is a multi-media publisher of books, recordings, and videos on topics related to the Institution's collections and research interests. Although the Institution issued its first publication in 1848, the Press was given its current name in 1966, and the bulk of its growth has occurred since 1980. The Smithsonian Institution Press has five programmatic divisions. The University Press publishes scholarly works, including research reported in the Smithsonian Contributions and Smithsonian Studies series, for academic audiences as well as a small number of books for general readers. Smithsonian Books produces single volumes and continuity series of books aimed at a wide audience of sophisticated readers attracted by serious thought and scholarship. The Smithsonian Collection of Recordings produces recordings that reflect the diversity and depth of the American musical heritage. The Book Development program creates books for Smithsonian visitors and works in partnership with other publishing houses to develop innovative and highly marketable publications for adults and children. Finally, Smithsonian Video acquires videos from within the Institution and from independent producers, public television stations, and similar sources for sale by direct mail and retail. Distribution of these Smithsonian Institution Press products is accomplished through a commissioned retail sales force, direct mail sales, and co-publishing arrangements.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the Smithsonian Institution Press.

PROGRAM:

University Press - This division publishes works of scholarship and general interest, which are sold to the academic community, libraries, and the public through retail trade distribution. Subject areas include art, archeology, anthropology, aviation, folklore, history, material culture, music, and science. The University Press produces Smithsonian Year, the Institution's annual report and the supplementary Annals of the Smithsonian Institution, for free distribution throughout the Institution and to Congress, Depository Libraries, and the international scholarly community. It also publishes the American Historical Association's annual report and the Bylaws of the Board of Regents of the Smithsonian. Smithsonian Year 1992 is a compact, highly illustrated publication acknowledged as a valuable development tool for the Institution. The accompanying Supplement, again published directly from electronic files prepared by the bureaus and offices, included the Financial Report as well as the Chronology. Next year an expanded Supplement will be distributed over the Internet as the Annals of the Smithsonian Institution.

Notable titles published by the University Press in FY 1993 included Chemistry Imagined: Reflections on Science, by Roald Hoffmann and Vivian Torrence; The Great War in the Air: Military Aviation from 1909 to 1921, by John H. Morrow, Jr.; Jean Dubuffet, 1943-1963, with contributions by James T. Demetrion, Susan J. Cooke, Jean Planque, and Peter Schjeldahl; Free People of Color: Inside the African American Community, by James Oliver Horton; New Voices in Native American Literary Criticism, edited by Arnold Krupat; Archeology of the Frobisher Voyages, edited by William W. Fitzhugh and Jacqueline S. Olin; and "We'll Understand It Better By and By": Pioneering African American Gospel Composers, edited by Bernice Johnson Reagon.

The Series section of the University Press is supported solely by Federal funds. It reports research in Smithsonian Contributions and Smithsonian Studies, distributed free of charge to Depository Libraries and throughout the scholarly community. Monographs published in FY 1993 include The Flowering of Man: A Tzotzil Botany of Zinacantán, by Dennis E. Breedlove and Robert M. Laughlin (Smithsonian Contributions to Anthropology, no. 35); Archeological Exploration of Patawomeke: The Indian Town Site (44St2) Ancestral to the One (44St1) Visited in 1608 by Captain John Smith, by T. Dale Stewart (Smithsonian Contributions to Anthropology, no. 36); Flora of Micronesia, 5: Bignoniaceae-Rubiaceae, by F. Raymond Fosberg, Marie-Hélène Sachet, and Royce Oliver (Smithsonian Contributions to Botany, no. 81); Field and Laboratory Investigations of Antarctic Meteorites Collected by United States Expeditions, 1985-1987, edited by Ursula B. Marvin and Glenn J. MacPherson (Smithsonian Contributions to the Earth Sciences, no. 30); The Port Orford, Oregon, Meteorite Mystery, by Roy S. Clarke, Jr. (Smithsonian Contributions to the Earth Sciences, no. 31); Paleobiology of Climactichnites, An Enigmatic Late Cambrian Fossil, by Ellis L. Yochelson and Mikhail A. Fedonkin (Smithsonian Contributions to Paleobiology, no. 74); Myodocopid Ostracoda of the Benthedi Expedition, 1977, to the NE Mozambique Channel, Indian Ocean, by Louis S. Kornicker (Smithsonian Contributions to Zoology, no. 531).

Smithsonian Books - This division, financed entirely with nonappropriated Trust funds, publishes books for the Smithsonian Associates and similar audiences on subjects relating to the Institution's collections and research interests. In FY 1993 the division, which distributes primarily through direct mail, published Smithsonian Frontiers of Flight, a book that accompanied the 13-part Discovery Channel television series of that same name, and Looking at Earth, a book that is based on the popular exhibition at the National Air and Space Museum. These titles join an impressive and popular list that includes The Smithsonian Book of Books; Washington, D.C.: A Smithsonian Book of the Nation's Capital; After Columbus: The Smithsonian Chronicle of the North American Indians; Exploring the West; The Smithsonian Book of Flight; The Smithsonian Book of North American Indians; and the deluxe Treasures of the Smithsonian.

Smithsonian Collection of Recordings - This division, financed by nonappropriated Trust funds, publishes popular and scholarly recordings aimed at both the direct mail and regular retail markets. During FY 1993 the American Songbook continuity series on American twentieth-century songwriters continued with releases covering Oscar Hammerstein, Alan Jay Lerner, Hoagy Carmichael, Duke Ellington, Johnny Mercer, and Jule Styne. A definitive four compact disc/four cassette boxed set, *Smithsonian Collection of Classic Blues Singers,* containing 94 recordings spanning the years 1923 to 1988, was released in August, as was *We'll Meet Again,* a two compact disc/two cassette collection devoted to the love songs of World War II. The existing collection *Singers and Soloists of the Swing Bands* was repackaged and remastered for compact disc release, retitled *Swing That Music!*, and issued as a four compact disc/four cassette boxed set. Two co-productions were also undertaken, one with the Centre for Southern Folklore in Memphis, to produce a compact disc entitled *Memphis Rocks: Rockabilly in Memphis, 1954-1968,* and one with Smithsonian Folkways to issue a collection of performances from the Folkmasters Concerts at Wolf Trap. Final marketing decisions are awaited on the release of a continuity series devoted to great American symphony orchestras.

Book Development - This division publishes popular books for adults and children. Developed with Smithsonian museums and frequently written by curators, these books are directly related to Smithsonian research interests and collections and are sold by the Press to Smithsonian markets and by commercial publishers to the general trade. Lead titles under development in FY 1993 included Smithsonian Timelines of the Ancient World, a major adult co-publication, and Blue Planet, a science title for children based on the IMAX film. The division is currently launching an appointment book program for the Smithsonian direct mail audience. Backlist titles generating strong revenue include the Smithsonian Picture Tour and Smithsonian Treasury series, as well as the museum guidebook series in English, French, German, Japanese, and Spanish.

Smithsonian Video - This new division, financed with nonappropriated Trust funds, acquires and distributes videotapes of special interest to the Smithsonian collections and the Smithsonian Institution Press's mission. For sale to the general public as the Smithsonian Video Library, titles are being developed in American and world history, air and space, anthropology, nature, archeology, ethnic cultures, literature, and performing arts. Notable in

FY 1993 was the successful completion of negotiations with Sony and the Estate of Leonard Bernstein for the Press's distribution of the 25-volume set of Bernstein's *Concerts for Young People,* and with the Library of Congress to inaugurate a series of archival videotapes commemorating the "Centenary of Cinema."

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - The sale of Trust-funded books, recordings, and videos, and the royalties received therefrom, provide the resources that support development, editorial, design, production, marketing, warehousing, and distribution expenditures, as well as supply additional resources to the Unrestricted General and Special Purpose Trust funds of the Institution.

INTERNATIONAL CENTER

International Center

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	12	822	8	475	-	50	-	45	-	38
FY 1994 Estimate	10	747	6	450	-	50	-	45	-	38
FY 1995 Estimate	10	747	6	450	-	50	-	45	-	38

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - Located in the S. Dillon Ripley Center of the Quadrangle Complex, the International Center is a facility that provides office space, equipment, and administrative services for several independent Smithsonian divisions. These currently include the Office of International Relations (OIR), the International Gallery (IG), the Institute of the Americas Project (IAP), and the Environmental Awareness Program (EAP). Offices also are provided for the Council of American Overseas Research Centers (CAORC). As a result of the Institution's Restructuring Plan implemented in FY 1993, the Smithsonian Institution/Man and the Biosphere Biological Diversity Program (SI/MAB) is now reflected under the Smithsonian Tropical Research Institute.

For FY 1995, the Smithsonian is not seeking additional funding for programmatic increases for the International Center.

PROGRAM: The International Center was established in 1983 to coordinate the Institution's international interests and facilitate its work abroad with a global network of collaborators and research material. Beyond this, the International Center has sought to place the Institution's scholarly work at the service of the general public, assisting the Institution's constituents around the world in understanding an ever-expanding body of information.

Office of International Relations - The Office of International Relations (OIR), which reports to the Assistant Secretary for External Affairs, supports Smithsonian research and programs abroad, serving as the Institution's liaison with institutions and individuals, international organizations, and government foreign affairs agencies. The Office also assists with the logistical details of international exchanges of collections and personnel and serves as a

point of contact for scholars, museum professionals, and foreign officials seeking to establish cooperative relationships with the Smithsonian. Specific responsibilities include:

- providing guidance in the conduct of international relations and information on foreign affairs affecting Smithsonian work abroad;
- advising on or managing international projects of concern to the entire Institution;
- arranging appropriate contacts in international organizations and agencies in support of efforts by the Assistant Secretary for External Affairs to draw upon nontraditional resources;
- assisting with communications and logistical details of international research and participation by Smithsonian staff in meetings abroad;
- drafting official correspondence and negotiating agreements for international cooperative programs;
- assisting foreign colleagues and officials who visit the Smithsonian or participate in programs in the United States;
- providing travel documentation, including passports and visas, for Smithsonian travelers, as well as visa sponsorship for foreign colleagues traveling to the Smithsonian.

OIR provides staff support for the International Activities Council (IAC), composed of the Assistant Secretaries for the Sciences, for the Arts and Humanities, for Education and Public Service, and for External Affairs, who collectively oversee the broad range of international programs undertaken throughout the Institution. Counsel and information gathered by OIR assist the IAC in coordinating the international interests of the Smithsonian.

The Office also manages two grants programs: the Smithsonian Foreign Currency Program and the International Exchange Program, both of which facilitate work abroad and international cooperation.

International Gallery - The International Gallery presents exhibitions that deal with significant global topics from various disciplinary points of view or cultural perspectives. Exhibitions recently presented in the International Gallery include "Degenerate Art," an examination of modern works condemned by authorities in Nazi Germany; and, in 1993, "Shared Visions," an exhibition of paintings and sculpture by contemporary Native American artists. A number of public and scholarly programs are planned in conjunction with each exhibition that appears in the International Gallery. The International Gallery reports to the Assistant Secretary for Arts and Humanities and mounts its exhibitions in the S. Dillon Ripley Center facilities.

Institute of the Americas Project - A proposed Institute of the Americas is currently under study. Its purpose would be to address concerns of unrepresented constituencies, consider different scholarly viewpoints, and foster a greater understanding of hemispheric issues and challenges. The Institute is envisioned as a multi-disciplinary and multi-lateral research center focusing on cultural and scientific issues of importance to the Americas. It would take as its point of departure the programs created at the Smithsonian for the 1992 Columbus Quincentenary. These programs created an awareness of a compelling need to address concerns of large constituencies previously neglected at the Institution. Quincentenary programs opened forums for diverse viewpoints and fertile scholarly ideas, cultivated through newly established networks of institutions and individuals throughout the United States and the western hemisphere. An Institute of the Americas would be designed to pursue these connections, fostering scholarly and programmatic exchanges and thereby filling a void in the Smithsonian's activities.

Environmental Awareness Program - The Environmental Awareness Program (EAP) provides a bridge between science and policy by gathering and disseminating information about a wide range of environmental issues. Established at the Smithsonian in 1990, EAP reports to the Assistant Secretary for the Sciences and works with Smithsonian bureaus and outside groups to reach the general public and professional audiences nationally, through exhibitions, publications, conferences, and workshops.

In FY 1992, EAP initiated a three-year project on ocean conservation issues. The project includes a public symposium, a traveling exhibition, and the publication of a scholarly book. Each segment of the project will explore a wide variety of marine-related environmental issues affecting near-shore and open oceans, including loss of biological diversity, pollution, use of natural resources, coastal development, and global change.

In addition to programs initiated by EAP, the Office provides information to news media, responds to public inquiry letters and calls, and participates in projects planned by other groups. To encourage more accurate and informed news coverage of environmental issues, EAP will continue to produce informational programs for news media. In FY 1992, EAP co-sponsored a series of briefings for national news media in preparation for the United Nations Conference on Environment and Development in June 1992. EAP responds to inquiries about environmental issues from individuals as well as from professional and community groups. In addition to frequent mailings to other organizations and general public, EAP refers requests for information on specific issues to appropriate Smithsonian bureaus and outside groups. In FY 1991, EAP developed and distributed more than 27,000 copies nationwide of "A Better World Starts at Home," a colorful poster providing information on environmental issues and tips for establishing a more environmentally responsible household. In the aftermath of a major study on environmental programs and exhibits in the Nation's museums, EAP also answers many requests for information and advice on museum-based environmental education.

Council of American Overseas Research Centers - The Council of American Overseas Research Centers (CAORC) facilitates and coordinates the work of its 14 member institutions.

Founded in 1981, CAORC fosters collaboration among its constituent members to strengthen academic programs and administrative procedures. It sponsors international research projects and serves as the forum through which member centers identify and address common concerns. The Council also undertakes the establishment of new centers in countries and regions where research exchange opportunities are lacking.

American overseas research centers are the recognized extensions of the advanced foreign research programs of major American universities and museums and thus constitute an important channel through which current and historical research about other countries invigorates American institutions. Centers located in Italy, Greece, Turkey, Cyprus, Tunisia, Morocco, Iran, Egypt, Jordan, Israel, Yemen, India, Pakistan, and Hong Kong have provided fellowship funds, access to local research resources, logistical support, liaison with host-country officials, and library and housing facilities to thousands of American academics. Their physical facilities serve as the principal point of contact for U.S. scholars and their host-country colleagues, and publication and seminar programs disseminate research results abroad and throughout the United States. While centers differ greatly from each other in size, program, and tradition, their private structure and the unbiased research produced through their sponsorship make them all respected focuses of American academia in the countries in which they operate.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Allotments provide funds to support planning and development of programs for the International Center and to foster research exchanges and collaborations among other Smithsonian divisions.

Restricted Funds - Restricted funds, consisting of gifts, grants, and other donations from individuals, foundations, organizations, and corporations are sought for support of exchanges of researchers and collections of Smithsonian divisions or affiliated overseas centers and for organizing their public presentations at the International Center or other sites. Funding for EAP's ocean conservation project has been provided by several private sources for 1993 and 1994 and is expected to continue through 1995.

Government Grants and Contracts - Funding for EAP's ocean conservation project has been provided by government grants and contracts with the expectation that funding will continue through 1995.

ADMINISTRATION

Administration

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	390	26,828	213	17,583	-	349	-	103	-	-
FY 1994 Estimate	390	27,352	212	16,999	2	408	-	100	-	-
FY 1995 Estimate	393	27,877	212	16,999	2	408	-	100	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - Administration includes executive management and related functions provided by the Offices of the Secretary, Under Secretary, Assistant Secretary for Finance and Administration, and Assistant Secretary for Institutional Initiatives. Offices reporting to the Under Secretary include the General Counsel, Government Relations, Policy and Program Development, and Public Affairs. The Assistant Secretary for Finance and Administration oversees a range of administrative and service offices, including the Office of the Comptroller, Contracting and Property Management, Equal Employment and Minority Affairs, Financial and Management Analysis, Human Resources, Information Resources Management, Ombudsman, Planning and Budget, Printing and Photographic Services, Risk Management, Sponsored Projects, Travel Services, and Treasurer. The Office of Facilities Services also reports to the Assistant Secretary for Finance and Administration and is responsible for Architectural History and Historic Preservation, Environmental Management and Safety, Design and Construction, Plant Services, and Protection Services (the latter three offices appear in the Facilities section of the budget). The Assistant Secretary for Institutional Initiatives oversees the Office of Development, included in this line-item, and the National Campaign of the National Museum of the American Indian (NMAI), included in the NMAI line-item. The Office of Inspector General is also included in the Administration line-item. Administrative units receive both appropriated funds and nonappropriated Trust funds for their operating expenses in approximate balance to the overall funding of the Institution. Currently, some offices, such as Sponsored Projects, are supported entirely with Trust funds.

For FY 1995, the requested increase for administrative units totals 3 workyears and $179,000. The requested increase will allow the Office of Contracting and Property Management to develop and manage the overall office supply program to realize savings from

volume discounts, and to support the increasing procurement-related workload. Included in the Administration request but justified in the Mandatory Costs Increases section of this budget are funds to cover Workers' Compensation ($217,000) and Unemployment Compensation ($129,000).

PROGRAM - The Office of the Secretary, in concert with the Office of the Under Secretary, oversees the Smithsonian Institution. The following offices report to the Under Secretary.

The Office of the General Counsel (OGC) provides legal advice and services to the Smithsonian Board of Regents, Secretary and Under Secretary, and other managers on the administration of programs; coordinates and oversees litigation and other adversarial proceedings to which the Institution is a party; disposes of administrative claims against the Smithsonian; and monitors developments in the law generally for application to Smithsonian programs. OGC also provides legal advice and services to the Woodrow Wilson International Center for Scholars, an affiliated organization.

The Office of Government Relations (OGR) maintains the Institution's relationships with Congress; presents Smithsonian policies, programs, and plans to Congress; and develops and clears legislative proposals and supplemental materials. It also coordinates and oversees Smithsonian participation at legislative hearings; serves as liaison with Federal agencies, state and local governments, and organizations with related interests; and provides constituent services for Congress and the Administration.

The Office of Policy and Program Development (OPPD) converts Institutional priorities, as determined by the Board of Regents and the Secretary, into policy and program initiatives. In consultation with internal units and external specialists, OPPD undertakes research, provides analyses, and issues reports on matters identified by the Regents and the Secretary and develops policy and programmatic recommendations for consideration by senior-level management. Current projects include helping to create a vision for the Institution in the 21st century and planning for the commemoration of the Smithsonian's 150th anniversary in 1996.

The Office of Public Affairs (OPA) acquaints the public with the programs and policies of the Institution through a variety of publications and by working with newspapers, magazines, television, and radio to gain media exposure for its exhibits, public events, and research. A major goal of OPA is to encourage culturally diverse audiences to take advantage of the many resources of the Smithsonian. Among the special publicity campaigns undertaken by OPA in FY 1993 were coordinating press conferences for the American Festival in Japan and "Beyond Category: The Musical Genius of Duke Ellington," and for Smithsonian exhibitions related to "America's Reunion on the Mall" during the Inauguration. OPA publishes a monthly events highlights calendar, Research Reports (a quarterly research bulletin), Smithsonian Runner (a bimonthly newsletter for Native Americans), The Torch (the employee newspaper), and a wide variety of visitor and special resource publications. In 1993, OPA published The Smithsonian Institution: A World of Discovery, a behind-the-scenes look at research throughout the

Institution. A guide for disabled visitors, Smithsonian Access, is being updated. At the advice of an advisory committee, radio advertising is being increasingly utilized, especially to reach African Americans. Spanish-language advertisements appear in several local Latino newspapers, highlighting exhibits and activities of special interest to Latinos. OPA has a permanent public relations specialist for the National Museum of the American Indian, who also serves as editor of Smithsonian Runner, a newsletter for 3,000 Native Americans, tribal museums, Indian and non-Indian journalists, and 22,000 Contributing Members of NMAI. OPA continues to develop media plans and mailing lists for communicating with Asian American audiences.

The Assistant Secretary for Finance and Administration oversees financial, administrative, and facilities services. In FY 1993, under the direction of the Assistant Secretary, Total Quality Management (TQM) concepts and practices were applied to a number of pilot projects throughout Finance and Administration (F&A) offices. Over time, will not only continually improve these services; it will also reduce inefficiencies and increase employee satisfaction. The following organizations, listed alphabetically, report to the Assistant Secretary for Finance and Administration.

The Office of Architectural History and Historic Preservation (OAHP), under the Office of Facilities Services, coordinates historic preservation planning and implements the Institution's historic preservation policy and practice. The Office also collects and analyzes information on the history of existing and future buildings of the Institution and maintains the OAHP Castle Collection of antique furniture housed in the Smithsonian Institution and Arts and Industries buildings.

The Office of the Comptroller (OC) accounts for and reports on the Smithsonian's assets and liabilities by collecting, authenticating, classifying, and recording the financial transactions of the Institution. OC reports financial information to the various levels of Smithsonian management and to external organizations and maintains the official records of the accounts.

The Office of Contracting and Property Management (OCPM) is the acquisition, contracting, and property management office for the Smithsonian Institution. Contracting for the Institution is performed by this office directly or through limited delegations of procurement authority issued by the director of this office. OCPM contracts for the majority of goods and various sophisticated equipment and specialized services used to support Smithsonian programs, projects, and facilities, including major building construction, renovation, and alteration projects.

The Office of Environmental Management and Safety (OEMS), part of Facilities Services Group, administers environmental management, fire protection and prevention, and occupational and visitor safety programs. OEMS also disseminates and implements the requirements of all new fire protection, safety, occupational health, radiation and environmental laws, regulations, and standards. In FY 1993, OEMS completed comprehensive fire protection, safety, and environmental program evaluations at 23 Smithsonian facilities, including the National Zoological Park and all outlying facilities such as the Smithsonian Tropical Research

Institute, Smithsonian Astrophysical Observatory, and the Cooper-Hewitt Museum. Hazardous waste minimization continued to be promoted through training and technology transfer. The Office provided oversight of the Smithsonian's Asbestos Management Program, monitoring the results of the Institution-wide Asbestos Assessment Survey, revising contractor removal specifications, and developing an operations and maintenance plan for asbestos-containing building materials. In addition, OEMS provided ergonomic consultation to Smithsonian staff and volunteers.

The Office of Equal Employment and Minority Affairs (OEEMA) directs, oversees, and facilitates the Institution's efforts to achieve equal opportunity in all aspects of the Smithsonian's employment and business relationships. The Office monitors, evaluates, and reports to senior management the Institution's progress in implementing cultural diversity goals. Responsibilities include monitoring cultural diversity plans and accomplishments; implementing a data flow analysis system to assess the effectiveness of the Institution's recruitment efforts and cultural diversity practices; maintaining a resource data base of potential applicants from culturally diverse backgrounds; processing Equal Employment Opportunity complaints and facilitating resolutions; overseeing the employment and accommodation of people with disabilities; and implementing and coordinating a small and disadvantaged business utilization program that ensures that small, small minority-, and women-owned businesses receive appropriate consideration in the Institution's procurement of goods and services.

The Office of Facilities Services (OFS) is responsible for creating the physical environment that enables the Institution to accomplish its mission. The Office provides leadership for and integrates physical plant operations, maintenance, repair, and improvement; protection services, including physical security; medical services and occupational health; safety, fire protection, industrial hygiene, and management of the environment; planning, design, and construction of new facilities; mail services; transportation management; grounds maintenance and horticultural services; audiovisual services; and architectural history and historic preservation.

The Office of Financial and Management Analysis (OFMA) provides a wide range of professional financial and management analysis support services to all levels of Smithsonian management. OFMA conducts reviews and studies of operations, systems, and organizational arrangements; facilitates the development of comprehensive policy issuances; and coordinates the internal controls review program. As an element of its financial management support, OFMA conducts in-depth financial analysis of Smithsonian programmatic activity.

The Office of Human Resources (OHR) plans and directs a comprehensive program of human resources management for the Smithsonian's diverse employee population. Among the numerous areas of responsibility assigned to OHR are recruitment and staffing, employee orientation, position management and classification, the merit promotion program, pay and performance systems, benefits administration, technical policy guidance, employee- and labor-management relations, training and development, advisory services, employee counseling, and personnel program evaluation. Additionally, OHR oversees such programs as workers'

compensation and unemployment insurance as well as automated personnel processing and record-keeping systems.

The Office of Information Resources Management (OIRM) provides the Smithsonian Institution's central computing and telecommunications services; leadership in information technology throughout the Institution in support of systems planning and development, communications, and training; and policy and guidance to assure the integrity and security of Institutional automated data. OIRM recently acquired and installed a new IBM 9121 computer, to meet requirements of the new Smithsonian Financial System and new software for the Smithsonian Institution Research Information System (SIRIS). Applications that had previously resided on the IBM 4381 were moved to the IBM 9121, and the new SIRIS software was installed on the IBM 4381. The Smithsonian Institution Network (SINet) was expanded to support 2,200 computers (up from about 400-500 computers at the end of FY 1991), and OIRM's electronic mail service was expanded to support 1,650 clients. OIRM has migrated a substantial portion of the applications on the aging Honeywell computer to the IBM 9121, and this effort is on target to be completed in FY 1994. Through June 1993, OIRM provided training to 754 staff, 2,940 Help Desk consultations, and 766 uses of equipment in the User Area.

The Ombudsman serves as a neutral party to whom employees can bring any work-related problem, concern, or complaint. In addition to the approximately 200 cases handled each year, the Ombudsman oversees the Smithsonian Emergency Assistance Fund, which provides loans to employees in emergency situations.

The Office of Planning and Budget (OPB) coordinates Institution-wide planning and budgeting. It produces the five-year plan, Choosing the Future, and conducts supporting analytical studies as appropriate. The Office formulates the Institution's Federal and nonappropriated Trust fund budgets for approval by the Secretary and the Board of Regents and prepares justifications for approved budgets for submission to the Office of Management and Budget and to Congress, subsequently interacting with each on related matters. OPB also monitors established budgets to ensure that spending plans advance planning goals and comply with pertinent limitations.

The Office of Printing and Photographic Services (OPPS) has one of the broadest Smithsonian-wide customer bases of any service organization in the Institution. OPPS's responsibilities include taking photographs, processing photographic materials, archival preservation of photographs, and duplicating documents. The Office has developed one of the finest environmental storage units in the world. By combining these advanced storage capabilities with new videodisc and digital technologies, this unit will pioneer many techniques for the preservation of photographic images while making them simultaneously and universally available.

The Office of Risk Management (ORM) assists and advises the Smithsonian in identifying and controlling risks. ORM is responsible for disaster-preparedness planning,

assessing the need for insurance, and handling liability claims against, and made by, the Smithsonian.

The Office of Sponsored Projects (OSP) is the primary point of administrative interface between the Smithsonian bureaus, offices, and research institutes and the public and private organizations from which grants and contracts are sought. OSP provides a range of administrative and financial services and resources. These services include pre-award review and approval, award acceptance, regulatory compliance, financial management, audit liaison, and indirect cost calculation.

The Travel Services Office (TSO) makes travel arrangements in the most economical and effective manner consistent with Smithsonian and Federal travel regulations. The Office provides support to all offices and bureaus of the Smithsonian except the Smithsonian Tropical Research Institute.

The Treasurer is responsible for the safety and integrity of the financial assets of the Institution. Components of this overall responsibility include management of the endowment by transfer and investment of funds, investment of the Institution's short-term funds, and management of financing for the Institution projects. In addition, the Treasurer has responsibility for real estate transactions, coordinates with the Comptroller to maintain appropriate controls over cash, and furnishes advice and recommendations on a range of financial issues to central management.

The Assistant Secretary for Institutional Initiatives has principal responsibility for development activities at the Institution. The Office of Development and the National Campaign of the National Museum of the American Indian report to the Assistant Secretary for Institutional Initiatives. In addition, the Assistant Secretary undertakes special studies on behalf of the Institution.

The Office of Development provides both direct fund-raising and development support activities in response to pan-Institutional and selected bureau and office development priorities. In addition to those services, the Office coordinates and participates in strategic development planning and activities for Smithsonian management and all fund-raising units. It is responsible for the advancement activities of three volunteer organizations, one membership auxiliary account, and one pan-Institutional recognition society for major donors. By securing gifts and grants from individuals, foundations, and corporations, as well as planned gifts from individuals, the Office achieves its goal of increasing both restricted and unrestricted funds. In addition, the Office is creating the infrastructure for the Smithsonian Fund for the Future in conjunction with the Smithsonian National Board.

The Office of Inspector General (OIG) provides policy direction and conducts, supervises, and coordinates audits, investigations, and inspections. The OIG promotes economy, efficiency, and effectiveness and prevents and detects fraud, waste, and abuse in Institution programs and operations. The United States Congress empowered the OIG under the

Inspector General Act. Thus far in FY 1993, OIG issued 6 internal audit reports and 11 contract audit reports, and closed 35 complaints. During FY 1992, OIG issued 9 internal audit reports and 10 contract audit reports and closed 62 complaints.

EXPLANATION OF PROGRAM INCREASE:

Office of Contracting and Property Management:

Smithsonian-wide Office Supply Program (SOSP) and Contract Support (3 workyears and $179,000) - This request is for a contract administrator and a procurement assistant to staff and fully implement and manage the new Smithsonian-wide Office Supply Program (SOSP) that will substantially reduce costs to the Institution through volume discount buying. This request is also for a contract specialist to manage an increasing workload due to the complexity, volume and variety of contracting projects now processed by a relatively small staff.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - Funding of these centralized management and administrative services from both appropriated and nonappropriated sources reflects a ratio of Federal and Trust fund support approximately in proportion to the operating program expenditures of the Institution as a whole. The amounts shown under unrestricted general Trust funds represent administrative expenditures for those units that are organizationally under Administration. Other units that receive Trust fund administrative allotments appear in the appropriate section of the budget. For example, administrative costs for the Smithsonian Astrophysical Observatory appear within its nonappropriated Trust funds section. The Office of Printing and Photographic Services generates sales income to help defray special purpose expenditures for producing, distributing, and marketing photographic material and slide sets. The Office of Equal Employment and Minority Affairs receives a program allotment that supports community outreach through exhibits and publications aimed specifically at women and minorities. Funds also provide for the identification and implementation of new financial and administrative management systems. Other anticipated expenditures in the special purpose category include support of computer conversion costs, a computer cost center, and small amounts used for legal seminars and research.

Trust fund allotments provide for public outreach activities of the Office of Public Affairs, including advertising and other initiatives in the African American, Latino, Native American, and Asian American media; radio advertisements; "Welcome" brochures for museum visitors in several languages; monthly newspaper advertisements of general Smithsonian events; and the Smithsonian employee newsletter.

Restricted Funds - This category includes foundation grants for scientific research publications, general research projects, and expenditures against investment income earned on endowment bequests.

FACILITIES SERVICES

Office of Design and Construction

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	50	3,477	3	357	-	-	-	-	-	-
FY 1994 Estimate	50	3,547	3	370	-	-	-	-	-	-
FY 1995 Estimate	65	5,510	3	370	-	-	-	-	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Office of Design and Construction (ODC) administers projects for the repair and improvement of the Smithsonian's physical plant by providing architectural, engineering, and facility planning services. These services include short- and long-range feasibility analyses, master plans, design and engineering studies, design development, contract document preparation, project management, contract administration, and preparation of cost estimates for construction. ODC staff reviews designs, plans interior design and space renovations, provides technical consulting support, and operates construction field offices. ODC also provides technical support and expertise in the design and construction of major exhibits.

For FY 1995, ODC requests an increase of 15 workyears and $1,963,000 to provide for staff/support costs, computers and engineering equipment. This increase includes nine architects and engineers and $1,500,000 essential to design and construct the R&R work properly at the current funding level and six workyears and $463,000 required to meet the demands of the FY 1995 program at the increased level of $35,000,000 proposed in this budget request.

PROGRAM - The Office of Design and Construction plans, designs, constructs, and provides project and financial management for all new construction, renovation, restoration, and repair projects for Smithsonian Institution facilities. Projects are currently located in Washington, D.C., Virginia, Hawaii, Arizona, Florida, Maryland, New York, Massachusetts and Panama. Recent work includes the complete renovation of the Freer Gallery of Art, exterior renovation of the Smithsonian Institution Building, completion of the new chiller plant at the National Museum of Natural History, and completion of Master Plans for the Suitland Collections Center and the Smithsonian Environmental Research Center. In addition,

construction for the George Gustav Heye Center of the National Museum of the American Indian to be housed in the recently renovated Alexander Hamilton Custom House in New York City has begun. ODC is currently conducting a survey of all Smithsonian facilities to determine requirements to bring the Institution into compliance with the Americans with Disabilities Act.

Project Management - ODC provides project management and professional assistance to Smithsonian bureaus to guarantee a safe, proper environment for visitors, staff, and the National Collections. ODC oversees projects and manages financial resources for the Institution's Repair and Restoration (R&R) and Construction programs. The R&R program preserves, repairs, renews, and ensures code compliance for the Smithsonian's aging physical plant. In addition to repairs and construction, ODC provides professional assistance related to exhibit construction and other space modification projects. Primary services include orchestration of planning, design, and construction activities; financial management of all projects; and review of exhibit designs to ensure compatibility with existing building systems and compliance with safety, health, and accessibility requirements.

Facilities Planning - Facilities planners at ODC provide planning services for master plan studies and related analyses. They develop funding and construction strategies for the R&R and Construction programs. These services include defining preliminary facility requirements in detail, collecting data for future projects, and providing advice on construction priorities.

Design and Construction - ODC's design and construction staff administers architectural, engineering, and construction contracts; reviews exhibit installation projects; and supervises the execution of new construction projects. The Smithsonian is one of the most frequently visited facilities in the world. Its buildings and grounds require constant repair, ideally without closings, so that the public has maximum safe access and programs continue with minimum disruption. The design and construction staff also executes the Smithsonian's extensive R&R program, which preserves the Institution's historic architecture and renews all its facilities.

Normally about 400 projects are in progress each year in ODC. Of these, 100 are construction contracts, and the rest are in a planning or design phase. Additionally, ODC reviews approximately 100 exhibits annually to ensure that they meet code and life safety requirements. Major projects planned for FY 1995 include:

- continued planning for compliance with the Americans with Disabilities Act,
- planning, pending authorization, for the proposed African American Museum,
- continued construction of the National Museum of Natural History East Court building,
- construction of the National Museum of the American Indian Cultural Resources Center in Suitland, Maryland,

- design of National Museum of the American Indian on the Mall,
- work on phase 5 of the Major Capital Renewal at the National Museum of American History,
- master planning and design for the National Air and Space Museum Extension at Dulles Airport,
- design of the proposed West Court building at National Museum of Natural History,
- completion of design for Major Capital Renewal of the east and west wings at National Museum of Natural History,
- concept design for renovation of mechanical systems at the Smithsonian Institution Building and the American Art and Portrait Gallery Building, and
- design of mechanical systems upgrade for the Arts and Industries Building.

EXPLANATION OF PROGRAM INCREASE:

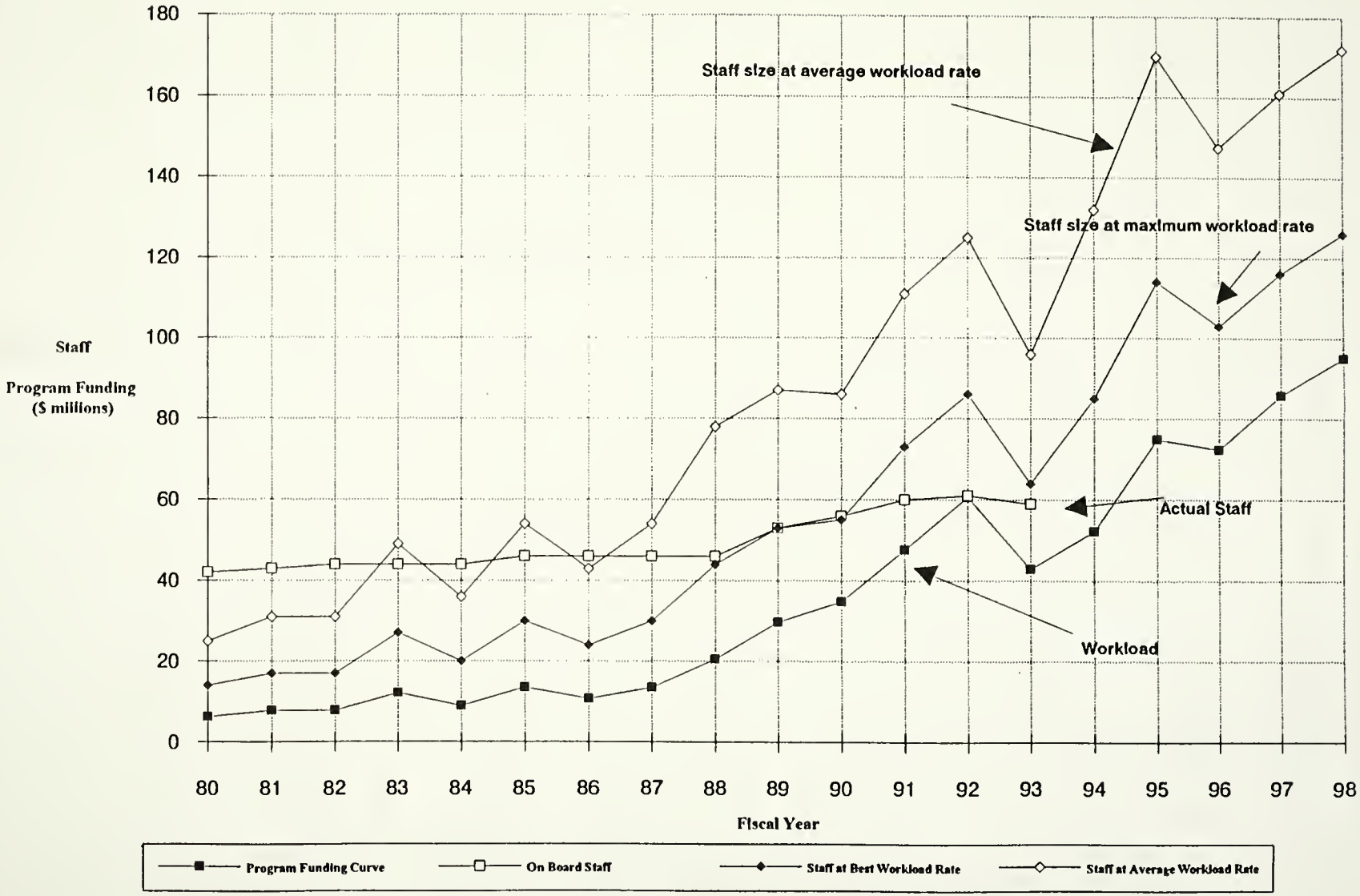
Staff/Support Costs, Computers and Engineering Equipment (15 workyears and $1,963,000) - This request is for an increase of nine architects and engineers and $1,500,000 to properly design and construct the R&R work at the current funding level. Of this amount, $861,000 is for space, computers, and other engineering equipment. The request also includes six workyears and $463,000 to meet the demands of the FY 1995 program at the increased level of $35,000,000 proposed in this budget request.

ODC Staff Algorithm - Following is a graphed algorithm showing the large increase in ODC workload versus staff over time. The algorithm is based on historical design and construction data. The requested increase will help bring ODC staff and workload more nearly into balance.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - An annual allotment provides salary and partial support because ODC serves both Trust and federally funded programs.

ODC Staff Algorithm



Office of Protection Services

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	808	29,101	-	23	-	242	-	-	-	-
FY 1994 Estimate	808	29,638	-	25	-	245	-	-	-	-
FY 1995 Estimate	808	30,328	-	25	-	245	-	-	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Office of Protection Services (OPS) protects and secures the National Collections entrusted to the Smithsonian Institution; ensures the safety and security of staff and visitors, while permitting an appropriate level of public access to collections and properties; and provides occupational medical services to staff and emergency medical services to visitors and staff.

For FY 1995, the Office of Protection Services seeks funding to enhance a security training program ($100,000) and begin purchase of a new communications systems ($500,000).

PROGRAM: The Office of Protection Services provides round-the-clock security and health services for all Smithsonian facilities in the Washington, D.C., area, at the Cooper Hewitt Museum of Design and the National Museum of the American Indian in New York City, and the Smithsonian Tropical Research Institute in Panama. OPS integrates uniformed security services, alarm system monitoring and maintenance, investigation services and escorts, and health services to provide a safe and secure operating environment. Currently, OPS is striving to modernize and improve training of its employees by providing them with state-of-the-art automation, systems, and equipment so they can perform their mission into the 21st century.

Training - OPS' investment in the professional training of the security force and in every employee supporting the security force and health services will remain its primary program activity for the present and future. In FY 1993, OPS funded security officer training in a Smithsonian joint venture with Jacksonville University and Ft. McClellan, Alabama. The first three-week course, "Training the Sentinels of Our Nation's Treasures," graduated 35 officers. It

is the first museum security course to award college or continuing education credit. Three more courses will graduate officers before the end of FY 1993.

OPS performs a mission that mandates a highly trained and skilled workforce, and the penalties for poor performance because of lack of training have serious legal and security repercussions. The Smithsonian Institution's role as the "National Museum" makes it the focal point for unsurpassed museum visitation. OPS will integrate a fully staffed directorate of training into its reorganization in FY 1994. This training investment represents a much-needed Smithsonian commitment to improving employee qualifications and services.

Security Alarm System - In FY 1993, OPS funded a U.S. Corps of Engineers' study to recommend long- and short-term strategies for its security alarm system upgrade and replacement. The team, from the Intrusion Detection System Center of Expertise, Huntsville, Alabama, completed initial studies in August 1993. Their initial findings concluded that the current security system can no longer meet security requirements and must be replaced. Work continues on preliminary cost estimates.

Health Services Upgrade - The increasing demand for occupational health services and programs mandated by the Occupational Safety and Health Administration (OSHA) have prompted an exponential growth in Health Services support over the last five years. In FY 1993, OPS planned and developed new health services space at L'Enfant Plaza. OPS expects to occupy the facility in FY 1994 and will staff it with additional nurses and health technicians. OSHA-mandated programs, especially the increase of blood pathogen requirements, carry tremendous legal burdens for the Smithsonian Institution. OPS will expand the Health Services Division in FY 1994 to comply with new requirements and to reinforce the office's commitment to a quality occupational health program for all Smithsonian employees.

EXPLANATION OF PROGRAM INCREASE:

Training Program ($100,000) - The Office of Protection Services will continue to implement its museum security training program.

Communications System ($500,000) - OPS must purchase a new, modernized communications radio system to upgrade a 20-year-old radio system for which spare parts are becoming increasing difficult to obtain, which does not provide complete communications throughout the museums and remote locations, and will not meet new requirements set by the National Telecommunications Information Agency in the Washington, D.C., area. The funds represent the first of several installments to procure a new radio system beginning in FY 1995. Full implementation is expected by FY 2000.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds - These funds, provided by an allotment and reimbursements for the use of security services at special events and functions at Smithsonian facilities, are used to support administrative costs of the Office.

Office of Plant Services

(Dollars in Thousands)

Fiscal Year	APPLICATION OF FUNDS									
	FEDERAL FUNDS		UNRESTRICTED FUNDS				RESTRICTED FUNDS		GOV'T GRANTS & CONTRACTS	
			General		Special					
	FTE	Amount	FTP	Amount	FTP	Amount	FTP	Amount	FTP	Amount
FY 1993 Estimate	492	46,026	1	871	8	640	-	7	-	-
FY 1994 Estimate	492	47,903	1	859	8	651	-	7	-	-
FY 1995 Estimate	492	51,190	1	859	8	651	-	7	-	-

FTE = Full-time equivalent
FTP = Full-time permanent

ABSTRACT - The Office of Plant Services (OPlantS) operates, maintains, and repairs 15 museum and art gallery buildings and grounds as well as many other work and collection storage areas located in the Washington metropolitan area and New York City. In support of research, exhibitions, education, and other public programs, OPlantS provides utilities, transportation, mail services, exhibits renovation, and other program services. OPlantS also provides technical assistance to several Smithsonian units located outside the Washington metropolitan area, including the Smithsonian Tropical Research Institute in Panama, the Fred Lawrence Whipple Observatory in Arizona, and the Smithsonian Environmental Research Center in Edgewater, Maryland.

The South Group Facilities Management and Quadrangle Facility Management are also part of this line-item. South Group Facilities Management offers a range of maintenance services and safety and occupational health management for the Arts and Industries Building and the Smithsonian Institution Building. Quadrangle Facility Management offers similar services for the Arthur M. Sackler Gallery, the National Museum of African Art, the International Gallery and the S. Dillon Ripley Education Center, located in the Quadrangle Complex.

For FY 1995, OPlantS requests an increase of $200,000 to fill some currently authorized but unfunded positions and purchase supplies and equipment to perform essential routine maintenance and repair work in Smithsonian buildings. An increase of $3,087,000 justified in the Mandatory Cost Increases section of this budget will support the Institution's central utilities and rent.

PROGRAM:

I. Office of Plant Services - The Office of Plant Services operates, maintains, and repairs more than 6.5 million square feet of building spaces. The Office maintains building interiors and exteriors, elevators, escalators, and mechanical and electrical equipment. Additionally, OPlantS maintains lighting and refrigeration components and oversees emergency property repairs. The Office provides trade and craft support for the Institution, including plumbing, electrical, wood crafting, painting, and plastering efforts. In addition to supporting Smithsonian research projects and office relocations and modifications, OPlantS supports exhibition installations and public events throughout all Smithsonian facilities.

The Office's automated Facility Monitoring System continually analyzes and controls mechanical equipment throughout the Institution. This system monitors areas of buildings requiring stable humidity and temperature control and alerts a control center when deviations from normal conditions occur. Since this automated system identifies abnormalities so quickly, immediate adjustments avoid costly repairs and prevent damage to the National Collections.

The Office's automated Preventive Maintenance System schedules regular preventive maintenance on building operating systems, ensuring increased reliability, reduced repair costs, and longer life. This system schedules preventive measures for fire prevention systems, guard stations, and automatic lighting as well as roofing systems and heating, ventilating, and air conditioning systems in all museums and the Smithsonian Environmental Research Center.

The Office operates a supply warehouse to stock and distribute frequently used building maintenance and custodial supplies and materials. To obtain the best prices, OPlantS purchases these materials in bulk. In addition to supporting office relocations and modifications, OPlantS offers packing, crating, warehousing, and moving services for museum objects and collections. The Office also provides a full range of transportation services for the Institution as well as mail services and postage monitoring.

The Horticultural Services Division in the Office of Plant Services maintains the Smithsonian grounds and applies the discipline of horticulture in educational, scientific, research, exhibition, and display activities throughout the Institution. Garden furnishings from the collections and plants propagated and grown at the Smithsonian greenhouse-nursery are used in landscape design and interior and exterior displays. Exterior pest control, removal of trash from the gardens, and snow and ice removal are also the responsibility of this division.

In FY 1993, OPlantS provided trade and craft support to museums and other Smithsonian organizations, including preparation of space for new exhibitions. Notable among these exhibitions were "Imperial Austria" at the International Gallery; "Direction-Alison Saar" and "Susan Rothberg Paintings" at the Hirshhorn Museum and Sculpture Garden; "Where Next, Columbus?" at the National Air and Space Museum; "Forum" at the National Museum of American Art; "American Wicker" at the Renwick Gallery; and "Two Sculptors, Two Eras" at the Anacostia Museum. OPlantS craftspersons renovated office space to accommodate

changing needs in various locations; completed energy conservation projects at the American Art and Portrait Gallery Building, the Smithsonian Institution Building, and the Hirshhorn Museum and Sculpture Garden; and continued installing automated exhibit lighting systems. The Facilities Inspection Program identified and estimated additional facility repair needs to be performed by OPlantS and/or contract personnel under the Repair and Restoration of Buildings program. Unfunded requirements identified by the inspection program form the basis of the annually compiled schedule of essential maintenance and repair. In January 1993, OPlantS also provided support for a variety of Presidential inaugural activities throughout Smithsonian facilities and on the National Mall.

The Potomac Electric Power Company commended the Office of Plant Services for continued participation in the electrical Load Curtailment Program, New Building Design Program, and Commercial Lighting Program.

Chargeback System for Exhibition and Program Support - Effective in FY 1994, OPlantS begins a chargeback system for central Institution-wide services for exhibitions and program support. The plan provides for the chargeback system to reprogram funds ($1.1 million currently included in the OPlantS base) to individual bureaus and offices which use the services of OPlantS. The goal is to reduce the overall costs of supporting exhibit construction and other minor facilities services costs by requiring clients to better plan and more efficiently allocate from their own budgets their use of OPlantS's services through the chargeback system. Direct payment for in-house support services will also assist the Institution in capturing the true costs of exhibits work. The reprogramming from OPlantS to other bureaus and offices is based on an analysis of the usage of these services over the past three years.

II. South Group Facilities Management - South Group Facilities Management is responsible for cleaning, waste and recyclable trash disposal, minor maintenance, labor services, lamping, craft services, shipping and receiving, special events, and safety, occupational and environmental health program planning and execution for the Arts and Industries and Smithsonian Institution buildings. This Office also coordinates and monitors contracts for structural maintenance, waste and recyclable trash removal, pest control, and renovation projects for these buildings.

III. Quadrangle Facility Management - Quadrangle Facility Management provides a wide variety of support services to the Education Center of the S. Dillon Ripley Center, National Museum of African Art, Arthur M. Sackler Gallery, Smithsonian Associates (formerly the Resident Associates Program and the Smithsonian Associates Program), Smithsonian Institution Traveling Exhibition Service, and the International Center. These services include space scheduling, custodial, labor, rigging, minor maintenance, lamping, shipping and receiving, and other related services. Facility Management is also responsible for coordinating trash removal and pest control services for the Quadrangle.

EXPLANATION OF PROGRAM INCREASE:

Expanded Support for Essential Routine Maintenance and Repair Work ($200,000) - This request is to fill currently authorized but unfunded positions and purchase supplies and equipment to perform essential routine maintenance and repair work in Smithsonian buildings. Early attention to routine work will prevent deterioration and repair backlog.

NONAPPROPRIATED SOURCES OF FUNDING:

Unrestricted General and Special Purpose Funds:

I. Office of Plant Services - Allotments provide unrestricted Trust funds to cover salaries and support costs in OPlantS. These allotments also provide the Trust share of space rental costs for administrative activities located at L'Enfant Plaza. Reimbursements from Trust-funded client organizations provide Special Purpose Funds for support services offered by OPlantS. These funds purchase supplies, services, equipment, and landscaping materials.

Restricted Funds - The principal source of income for these funds are donations from individuals who visit the gardens. The funds help support the upkeep of benches and plants in the gardens.

II. South Group Facilities Management - The primary source of nonappropriated funds is from reimbursements for special events. The amount varies depending upon the nature of the events and the requirement for overtime. This money has been used to purchase special event equipment, computer hardware and software, and supplies.

III. Quadrangle Facility Management - Trust funds are generated through reimbursements from special events. The amount varies each year depending on the nature of the events and the overtime required. The funds assist in purchasing supplies, services, and equipment for special events.

Construction and Improvements
National Zoological Park

1993 Appropriation.....$7,832,850
1994 Estimate.....$5,400,000
1995 Estimate.....$8,400,000

Appropriations to this account provide funding for:

- repairs, alterations, and improvements to plant property;
- additions to existing facilities and minor new facilities, including exhibits;
- plans and specifications for construction;
- renovation, restoration, and construction of new facilities outlined in the Master Plan.

The Zoo contracts for most construction and improvement projects. If the contractor's estimates are above acceptable cost levels, it is more economical to hire permanent or temporary laborers to accomplish the work. The account also funds related expenses such as relocation of animals during the renovation or construction of facilities and major grounds maintenance resulting from storm damage.

In keeping with the 1889 charter, the National Zoological Park endeavors to "administer and improve" the Zoo for "the advancement of science and instruction and recreation of the people" (20 U.S.C. 81). The National Zoological Park (NZP) complex includes 163 acres in the Rock Creek Valley of Washington, D.C., and a 3,150-acre Conservation and Research Center (CRC) located near Front Royal, Virginia. Since 1890, exhibition and public education functions have been centered in the Rock Creek Valley portion of the National Zoological Park. Conservation, training, research, and breeding are conducted at both Rock Creek and the Conservation and Research Center. Since 1975, CRC has assumed primary responsibility for Zoo programs to save threatened and endangered animal species.

The FY 1995 request is as follows:

Rock Creek Master Plan:	
Aquatic Trail - Living in Water	$1,000,000
Grasslands Exhibit	3,500,000
Utility Systems Upgrade	150,000
Conservation and Research Center Development Plan:	
Consolidated Maintenance Facility	500,000

Renovation, Repair, and Improvements:	
Rock Creek	2,300,000
Conservation and Research Center	950,000
TOTAL REQUEST	$8,400,000

ROCK CREEK MASTER PLAN - The National Zoo's Rock Creek facilities have been undergoing major renovation and improvements through implementation of the Master Plan. Congress has appropriated a total of $69,084,900 from FY 1974 to FY 1993 to carry out major portions of the Plan. Full implementation of the Master plan, as revised in 1986, will keep the National Zoological Park among the world's finest zoos.

Aquatic Trail - Living in Water ($1,000,000) - Budget constraints in the FY 1993 and FY 1994 requests have necessitated a rescheduling of this project and a considerable downsizing of the concept. Funds received in FY 1993 and anticipated for FY 1994 will allow for the design and begin construction of the Aquatic Trail - Living in Water Phase I, and the FY 1995 appropriation will permit the design and construction of as many of the remaining clusters as can be downscaled to fit the funds available. Funding to be requested in FY 1996 will complete the exhibit.

The Living in Water exhibit, the focal point for the complex, will emphasize the relationship of water to living things of the aquatic world on this planet, of which two-thirds of the surface is covered by oceans. The exhibit will illustrate physical and chemical properties of water and focus on the development of biological groups living in water, presenting their adaptation and their extraordinary evolutionary radiation. Employing a full spectrum of media, the exhibit will emphasize specialization in reproduction, social signaling, respiration, and prey capture. It will serve as a prelude to the mixed species communities that will follow in the additional exhibit clusters.

Grasslands Exhibit ($3,500,000) - With funds anticipated in FY 1994 ($1,000,000), the Zoo will complete design and initial site preparation for the Grasslands exhibit. Once completed, the complex will include three new exhibits representing Grasslands in three geographic areas: African Savannas, American Prairies, and Australian Grasslands. Actual construction of the Grasslands exhibit will begin with funding requested in this budget.

A major addition to the Zoo experience will be "anticipation areas," which will introduce visitors to each of the three exhibits. These areas will also be places to rest and picnic and for children to play. Visitors will be educated on a variety of grasses from every imaginable viewpoint, from information about their luncheon bread (derived from grass) to where they can learn more about grass in the Grasslands exhibit and throughout the park.

The African Savannas exhibit will be adjacent to the Education Building and can be approached from either direction along the Zoo's Olmsted Walk. Animals such as cheetah, zebra, ostrich, blesbok, gerenuk, several species of gazelles, and dwarf mongoose will inhabit

the African Savannas. The exhibit will include a subterranean segment that will include soil invertebrates and underground dwellings of vertebrates. The current Panda Plaza will be the anticipation area for the American Prairies and the African Savannas exhibits.

Each of the three exhibits will be self-contained and cover a wide range of topics around the central theme: grasslands through time. Topics include the domestication of grains, human history on grasslands, the living world beneath the surface of grasslands, medicinal and food plants of grasslands, and multiple use of grasslands throughout the world through time.

Utility Systems Upgrade ($150,000) - The Zoo's in-ground electrical distribution system encompasses about 8,600 linear feet of electrical lines. Of these, 4,600 feet were upgraded to high-voltage lines within the past 15 years. The remaining 4,000 linear feet, consisting of medium-voltage lines, date back as far as the installation of the system in the 1920s and are in much need of replacement with up-to-date, reliable, and energy-efficient high-voltage lines. These lines serve important Zoo animal buildings, including the Panda, Elephant and Monkey Houses, as well as the public restaurant, the police building, and the steam plant. As environmental requirements for the maintenance of exotic animals become more stringent, reliable and safe electrical service becomes more essential to the long-term preservation of the National animal and plant collections in the care of the National Zoo.

The Zoo requests $150,000 in FY 1995 for design and beginning construction of the electrical system replacement. Replacement will proceed over several years, for which funds will be requested each year through 1998, when the project is to be completed.

CONSERVATION AND RESEARCH CENTER DEVELOPMENT - At the Conservation and Research Center, the Zoo has established a plan that will meet the Center's conservation, research, and public education needs well into the next century. This Development Plan results from the extensive analysis of CRC's operations and its facilities and future program needs. An important aspect of the plan is a built-in flexibility for growth that accommodates expansion of research and conservation programs at minimal costs.

Design of Consolidated Maintenance Facility ($500,000) - The Zoo plans to construct a new, prefabricated building that will consolidate maintenance, grounds, transportation, supply, and commissary operations into a single location. Design of the new facility will be accomplished with the funding requested in FY 1995. Actual construction will begin in FY 1996. Total cost of the maintenance facility (including design) will be $2,337,000.

The maintenance operations at the Center are currently housed in ten separate buildings located throughout the property. The existing shops do not provide adequate workspace or ventilation, and their scattered distribution hampers effective traffic flow and security. The new consolidated maintenance facility will allow the Center to:

- improve personnel supervision and efficiency, worker safety, and security;
- eliminate unnecessary traffic and traffic-related disturbances in the animal propagation areas within the central portion of the Center; and
- permit expansion of the Center's research and training facilities.

In keeping with the Center's Development Plan, this construction project will involve demolition of four dilapidated buildings dating from the early 1920s. Eight other buildings vacated by the consolidation will be renovated, over the next five to seven years, into research laboratories, offices, and equipment storage areas. This new maintenance facility will improve the Center's infrastructure so it will be able to meet its operational needs well into the next century.

RENOVATION, REPAIR, AND IMPROVEMENTS:

Rock Creek ($2,300,000) - The National Zoological Park is responsible for the repair and preventive maintenance of its facilities. The Zoo strives to maintain a safe environment for its visiting public and staff, provide ecologically suitable and comfortable enclosures for the animals, and maintain all buildings in good condition. The FY 1995 funding will help ensure that the Zoo's preventive maintenance program will not include a large backlog of major repair projects.

The Zoo's Rock Creek facilities, located on 163 acres, include almost 500,000 square feet of buildings and more than 160,000 square feet of roofs. Along with the Park's perimeter fence, measuring 10,546 linear feet, the Zoo's in-ground utility distribution system includes more than 4,600 linear feet of high-voltage electrical lines, approximately 4,000 linear feet of medium-voltage electrical lines, 16,000 linear feet of water mains, 6,000 linear feet of gas mains, 28,000 linear feet of sewer lines, and 14,000 linear feet of storm drains. The Park's preventive maintenance program includes the care of these systems to ensure safe operation of the total facility.

The major repair and renovation projects planned for the Rock Creek facility in FY 1995 include:

- removing asbestos (multi-year program);
- reroofing one major building;
- bringing fire protection and prevention systems up to code requirements (second year of multi-year major renovation program);
- renovating the interior of the Invertebrates Facility and Great Ape and Komodo exhibits;

- continuing preventive maintenance of heating, ventilating, and air conditioning systems (ongoing program);
- renovating and replacing interpretive signage (ongoing program);
- replacing the heating, ventilating, and air conditioning system in the Zoo Mane Restaurant; and,
- repaving some interior zoo roadways.

The Zoo requests $2,300,000 to continue its annual program of renovation, repair, and preventive maintenance for its Rock Creek facility. This level of funding for FY 1995 will enable the Zoo to provide the required level of general maintenance to all plant property.

Conservation and Research Center ($950,000) - The Zoo's Conservation and Research Center at Front Royal is a nonpublic facility devoted to the conservation of endangered wildlife through programs in propagation, research, and international biodiversity training. The 3,150-acre facility includes more than 89 structures ranging from animal shelters to research laboratories and residences. The property has more than 2 1/2 miles of roads, 20 miles of jeep trails, and 30 miles of fences.

Funding requested in FY 1995 will enable the Center to continue the required maintenance and upkeep of these diverse facilities. The major projects scheduled for FY 1995 include:

- renovating one animal barn (Building #142), two large storage buildings (Buildings #34 and #40), a Visitors' Accommodation (Building #159);
- renovating an ungulate barn (Dilger Barn);
- installing new heating systems in two large animal buildings (Buildings #4/9, and #5/8);
- constructing a new 20 x 60 foot hoofed stock barn at Meade pasture; and,
- completing miscellaneous exterior and interior repairs and renovations to several buildings and residences.

The Zoo request $950,000 for FY 1995 to support the Center's preventive maintenance program and help reduce the costly repairs at this important facility in the future.

National Zoological Park
Construction and Improvements
FY 1995 – FY 1999

Summary: PROJECT TITLE AND ESTIMATED COSTS			PRIOR FUNDING Federal	OUTSIDE FUNDING Non-Fed	FY 1995 REQUEST Federal	FUTURE FEDERAL REQUESTS FY 1996 Total	FY 1997 Total	FY 1998 Total	FY 1999 Total	Outyear Costs
	Title: **ROCK CREEK: Master Plan Projects**									
	Cost: Plan/Design	5,414,900	1,749,900		15,000	200,000	150,000	2,000,000	150,000	1,150,000
Authorized:	Construction:	48,485,000	3,400,000		4,635,000	5,750,000	3,850,000	2,000,000	11,600,000	17,250,000
Yes	TOTAL:	$53,899,900								
	Title: **Renovations & Repairs**									
	Cost: Plan/Design	615,000	245,000		70,000	70,000	73,000	77,000	80,000	
Authorized:	Construction:	16,335,000	4,505,000		2,230,000	2,230,000	2,277,000	2,473,000	2,620,000	
Yes	TOTAL:	$16,950,000								
	Title: **FRONT ROYAL: Development Plan Projects**									
	Cost: Plan/Design	478,000					263,000	215,000		
Authorized:	Construction:	6,722,000			500,000	500,000	1,337,000	1,235,000	1,750,000	1,400,000
Yes	TOTAL:	$7,200,000								
	Title: **Renovations & Repairs**									
	Cost: Plan/Design	190,000	55,000		25,000	25,000	25,000	30,000	30,000	
Authorized:	Construction:	7,010,000	2,095,000		925,000	925,000	925,000	1,070,000	1,070,000	
Yes	TOTAL:	$7,200,000								
	Title: **TOTAL:**									
	Cost: Plan/Design	6,697,900	2,049,900		110,000	295,000	511,000	2,322,000	260,000	1,150,000
Authorized:	Construction:	78,552,000	10,000,000		8,290,000	9,405,000	8,389,000	6,778,000	17,040,000	18,650,000
Yes	TOTAL:	$85,249,900			8,400,000					

Repair and Restoration of Buildings

1993 Appropriation.....$24,192,600
1994 Estimate.....$24,000,000
1995 Estimate.....$35,000,000

Smithsonian facilities include 15 museums and gallery buildings in Washington, D.C., and New York City and total more than 5.5 million square feet of building space. These museum buildings house research and collections management activities and a wide range of exhibitions in the fields of science, history, technology, and art. The Institution also operates and maintains restoration, storage, and aircraft and spacecraft display facilities in Suitland, Maryland, and New York City; centers for biological research, conservation, and education in Panama and on the Chesapeake Bay near Edgewater, Maryland; a center for astrophysics in Cambridge, Massachusetts; and the Whipple Observatory on Mt. Hopkins in Arizona. These facilities range in age from new to more than 140 years old, and many appear on the registers of historic landmarks.

The Repair and Restoration of Buildings (R&R) account pays the cost of repairs, corrective measures to meet life safety and health regulations, alterations to provide access for persons with disabilities, and replacement or renovation of major building components or equipment for Smithsonian facilities, with the exception of the facilities of the National Zoological Park. Repairs and renovations for facilities at the National Zoological Park are funded through the Construction and Improvements, National Zoological Park account.

The heavy public use of buildings and the demand for constant temperature and humidity levels to protect the National Collections exacerbate the natural aging process of building materials, equipment, and systems. The Smithsonian achieves longer-than-average predicted life for most equipment, even in the face of a 24-hour operation that places the equipment under a more severe duty cycle than normal. However, gradual base erosion in facilities maintenance staff resources is undermining the preventive maintenance program and will result in faster deterioration of the facilities in the future. Even the most effective preventive maintenance and regular repair programs cannot keep the equipment components of building systems operating forever. The Institution must overhaul heating, ventilating, and air conditioning (HVAC) systems and electrical and plumbing systems periodically to replace deteriorated equipment, wires, ducts, and pipes. It must repair the effects of weather on the exteriors of buildings and guard against interior damage. In addition, the enactment of new codes and regulations calls for building modifications to ensure a safe and healthful environment and access for visitors and staff with disabilities.

Funding levels for repair, code compliance, and preservation of buildings are not keeping pace with the rate of deterioration. A substantial backlog of essential work exists and continues to grow. These repairs are vital to ensure the continued reliable functioning of building

equipment and systems, long-term preservation of buildings, and compliance with life safety and health codes and standards. The most recent (February 1993) estimate of the backlog of currently unfunded projects is $226 million. This figure represents an increase from the January 1992 level of $221 million. To address this backlog, $24.2 million was received in FY 1993 with an additional $24 million requested for FY 1994.

Despite these annual increments of funding, many factors contribute to the continual growth of the problem. The backlog is not a static list of repair projects. Every year a number of problems that did not previously exist must be added to the backlog. For example, a piece of equipment might fail or reach the end of its useful life; or a roof might develop serious leaks where only a minor problem was evident the year before. Newly promulgated life safety and health codes and heightened sensitivity to environmental hazards may require work not formerly recognized as needed. In addition, a number of factors contribute to increased cost estimates for repairs already included in the backlog. In some cases, additional deterioration or damage caused by delay increases the cost of individual projects. More detailed studies of previously identified problems and the inflationary effect of project delays also contribute to higher cost estimates for the work. Only a sustained commitment to increased funding will allow the Institution to reduce the backlog in an orderly manner to ensure preservation of its buildings for continued use by future generations. To make progress in eliminating the backlog, the R&R program will require at least $35 million annually through the next ten years.

The Smithsonian separates projects under the R&R program into two categories and accordingly requests funding in two subaccounts. The first subaccount, Major Capital Renewal, includes funds for the cyclical replacement of major building systems and equipment and major renovation projects required to ensure long-term preservation of the buildings. These projects are different in magnitude, expense, and planning complexity from routine ongoing restoration work, repair projects, or replacements undertaken when a piece of equipment fails. More than half the identified backlog consists of these major replacement requirements for HVAC and electrical systems at the Air and Space, American Art and Portrait Gallery, American History, Arts and Industries, Natural History, Renwick Gallery, and the Smithsonian Institution buildings.

The second R&R subaccount is Repairs, Restoration, and Code Compliance. Funding requested through this subaccount will reduce over a period of time, the remainder of the backlog of repairs and other work needed to meet safety and health requirements. This subaccount encompasses six categories of routine maintenance and repair projects. This budget request presents an aggregate amount for each of the six categories, with a description of the kinds of work planned.

The composition of the FY 1995 R&R budget request follows:

REPAIR AND RESTORATION OF BUILDINGS

MAJOR CAPITAL RENEWAL		$14,500,000
REPAIRS, RESTORATION, AND CODE COMPLIANCE		
General Repairs	3,440,000	
Facade, Roof, and Terrace Repairs	6,520,000	
Fire Detection and Suppression Projects	765,000	
Access, Safety, and Security Projects	5,615,000	
Utility Systems Repairs	2,160,000	
Advanced Planning and Inspection	2,000,000	
Subtotal		$20,500,000
TOTAL REQUEST		$35,000,000

MAJOR CAPITAL RENEWAL - Projects in this category involve replacing major building systems and components that have outlived their useful lives. Complete replacement ensures long-term operation and preservation of the building. Modifications to the building also improve energy efficiency, meet fire detection and suppression requirements, and correct hazardous conditions. By coordinating these kinds of tasks, the Institution saves money and avoids repeated disruption to activities in the building. The Smithsonian achieves operating efficiencies as well by designing new building systems and components to work together. For example, by installing multiple-paned windows and increasing insulation, the Smithsonian can select heating and cooling equipment with lower capacity. The equipment costs less to purchase and install, and long-term operating costs are lower. The impact of renovation work on programmatic activities is a key factor in planning a major project. Work of this magnitude causes serious disruption to activities in the building. The Institution must relocate staff and collections from the areas under construction to prevent damage, allow staff to continue working during the construction period, and ensure continued public access and safety.

For FY 1995, the Smithsonian requests $14,500,000 for the projects described below:

American Art and Portrait Gallery Building ($1,000,000) - Constructed between 1836 and 1866, the American Art and Portrait Gallery Building was renovated for the Smithsonian in the 1960s by the General Services Administration. Most of the existing mechanical and electrical systems in the building were installed at that time and are now nearly 30 years old. The normal course of age and use have caused deterioration of these building systems, resulting in frequent failures and necessitating constant maintenance. The existing HVAC equipment cannot provide uniform temperature and humidity control necessary for long-term preservation of museum collections. The wide fluctuations in environmental conditions and inadequate

ventilation currently experienced actually promote the growth of mold and micro-organisms harmful to the collections, staff, and visitors.

The Institution plans to phase replacement of building systems over several years to allow the museums and other activities in the building to remain in operation during the renovation. The project will replace the existing HVAC system with new energy-efficient components that can control environmental conditions within a closely monitored range. Automated systems will reduce the labor cost of operating and maintaining the systems, and the new system will be designed to meet contemporary codes and ventilation standards. Obsolete and malfunctioning electrical panelboards, switchgear, and distribution networks will be replaced with newer more efficient equipment. The Institution requests $1,000,000 in FY 1995 to develop a master plan for the work and to begin design. Funding of this request will contribute to the long-term preservation and efficient operation of this historic building.

American History Building ($5,000,000) - A 1982 study of the HVAC system of the American History Building, now 29 years old, recommended replacement of the deteriorated heating, ventilating, air conditioning, and refrigeration equipment systems and controls. Replacement of these systems ensures continuous provision of required environmental conditions in an energy-efficient manner. By FY 1995, the Institution will have completed the original scope of work in the American History Building, which included replacement of HVAC equipment serving the first through fifth floors. The Institution requests a final increment of $400,000 in FY 1995, to complete the return of collections and staff displaced during the project.

The Smithsonian also requests $4,600,000 in FY 1995 for HVAC replacement and related work in the basement of the Museum. Renovation of the basement systems was not included in the original scope of the Major Capital Renewal project. However, problems over the past several years associated with air circulation and exhaust fumes and the deterioration of HVAC and electrical equipment make it imperative that the systems be replaced with equipment of sizes and types suited to present and projected use of the space. During the replacement procedure, the Museum will remove asbestos from existing equipment. The Institution received $250,000 in FY 1992 and $240,000 in FY 1993 to prepare design documents for the first phase of the basement work and to begin the relocation of staff and collections affected by the construction. The amount of $400,000 anticipated in FY 1994 will also relocate collections and staff affected by the project. The Institution will use the $4.6 million requested in FY 1995 for actual construction and for additional necessary relocations. Funding of this request will complete system replacement in the building to improve operating efficiency and extend its useful life.

Arts and Industries Building ($1,500,000) - The Arts and Industries Building is one of the finest examples of Victorian architecture in the Nation. Originally designed to house the rapidly growing National Museum, the building was started in April 1879 and completed in March 1881. The last major renovation of the HVAC system took place in the 1960s, with some additional work done in the mid-1970s to prepare for the opening of the "1876 Centennial

Exhibition." The heating, ventilating, and air conditioning equipment and electrical and other utility systems are now reaching the end of their useful life and must be replaced. Most spaces are heated and cooled by antiquated mechanical systems. Pressurized steam pipes, chilled water pipes, and electrical conduits are located in utility trenches under the first floor. These trenches contain asbestos and are filled with abandoned pipes and conduits, which make access for inspection, maintenance, and repair disruptive, difficult, and costly. In addition, the building envelope has substantial deficiencies, and its HVAC system cannot maintain optimum environmental conditions required for museum collections. With the recent decision to use the building to house the proposed African American Museum, this problem becomes critically important to correct.

Over the past several years, the Smithsonian has performed a series of studies concerning physical plant improvements and utility tunnel replacement for the building. The staff has contracted with an architectural and engineering firm to evaluate these studies and develop recommendations for the sequencing of work. On the basis of these recommendations, the Institution will use funds appropriated in FY 1993 ($200,000) and anticipated in FY 1994 ($1,000,000) to design and begin implementation of this initial phase of construction. The Smithsonian requests $1,500,000 in FY 1995 to continue the renovation work. The phased replacement of all mechanical, electrical, plumbing, fire protection, vertical transportation, and communications systems in the building will improve the physical plant's operating efficiency.

Natural History Building ($7,000,000) - Previous studies of the Natural History Building addressed building deficiencies in the HVAC and electrical systems and in energy conservation, fire detection and suppression, communications, security upgrading, and asbestos abatement. As a result of these studies, the Institution realized the magnitude of the work required and initiated a Master Implementation Plan to ensure that the Natural History Building is maintained in an effective manner. The Institution will schedule work to minimize disruption within the building and reduce costs by grouping tasks. The Museum will coordinate the exhibit reinstallation program with the renovation project. The Institution will fill in the East Court space with a new building to provide permanent storage space and modern efficient office and laboratory space for the Museum's current activities. During the renovation project this building will provide staging space for temporary relocation of staff and collections affected by the renovation. The Construction section of the budget request includes a justification for the East Court Building.

Guided by a fire protection master plan developed in 1979 and a recently completed asbestos survey, fire protection improvements and asbestos removal and containment work are well under way. However, the replacement of the HVAC and critical electrical equipment is the most significant aspect of this project and thus governs the overall work schedule. The majority of the HVAC equipment is now more than 25 years old and requires replacement. The automatic temperature control system is obsolete and does not operate satisfactorily. The age of 90 percent of the electrical lighting and power panels in the building is in excess of 20 years. Some of the electrical panels date from 1910 and present a potential safety hazard. Other panels installed in the 1960s that met standards at the time would not earn a UL

(Underwriters' Laboratory) listing for today's established safety standards, and replacement circuit breakers are no longer available. The Smithsonian must replace these components and other related electrical equipment because repair parts are no longer available.

The Institution completed a detailed plan for the replacement of building systems at the Natural History Building in fall 1989. The plan spreads the work over a number of years to provide the most cost-effective construction sequence, minimize disruption of programs, and prevent Museum closings. The scope of work includes:

- replacing the HVAC system with a new centralized system located in new roof mechanical rooms over the East and West Wings;
- replacing the chiller plant with updated equipment in a new vault beneath the southeast corner of the parking lot;
- replacing electrical transformers switchgear and panels throughout the building;
- modifying the building envelope, specifically by replacing the roof over the wings and installing roof insulation, replacing single-glazed windows in the wings with double-glazed windows, replacing roof rain leaders, and installing air locks or vestibules at entrances and loading docks;
- centralizing laboratories with new exhaust air systems;
- improving the automatic temperature control system;
- connecting the equipment to a central control and monitoring system.

The project will incorporate remaining fire protection work originally conceived under the Master Implementation Plan. Work will also include removing or encapsulating asbestos insulation located in the attics and attached to equipment, ductwork, and piping throughout the building.

The Institution has received a total of $31,130,000 through FY 1993 for this project. These funds have covered the cost of project planning and design of early phases of the work, the initiation of renovation work, and initial relocation of staff and collections. Construction of the new underground chiller plant and high voltage electrical system was completed in spring 1993. Design of the mechanical equipment rooms, roof replacement, and window restoration are complete, and construction began in January 1993. The Smithsonian has also used appropriated funds to make a number of interim repairs to the existing systems. Asbestos removal projects in the East and West Court mechanical towers were completed in FY 1991, and similar projects in the utility tunnels and east and west wing mechanical rooms of the building were finished in FY 1992 and FY 1993.

The Institution requests $7,000,000 in FY 1995 to complete equipping of the mechanical rooms, make interim repairs to failing equipment, and continue East and West Wing renovation. Also included are relocation costs for collections and staff displaced by the construction.

REPAIRS, RESTORATION, AND CODE COMPLIANCE - Projects in this category include:

- minor but essential repairs to building interiors, sidewalks, roads, parking lots, and docks;
- repairs to facades, roofs, skylights, terraces, and windows;
- installation of heat and smoke detection systems, sprinkler and chemical fire suppression systems, fire doors and fire-rated walls, and improvement of exit capability;
- improvements to ensure access for people with disabilities, correction of hazardous conditions and implementation of life safety and health code modifications, and security modifications and lighting;
- repairs and energy conservation improvements to HVAC, plumbing, electrical, and communications systems, and improvements to rest room facilities;
- advanced design of future-year projects, long-range planning for repair and restoration of Smithsonian facilities, and feasibility studies of specific problem areas.

For FY 1995, the Smithsonian requests $20,500,000 for the projects listed below:

General Repairs ($3,440,000) - Funds requested in this category support a wide variety of projects. These funds provide resources for minor, unscheduled, but essential repairs that the Institution cannot anticipate specifically or that do not fit into one discrete category. For FY 1995, the Institution requests $3,440,000 for such projects as:

- repairing walls and restoring interior finishes in the Rotunda and north lobby area of the Natural History Building;
- replacing the dock storage sheds and installing a fuel tank at the Smithsonian Environmental Research Center and replacing the Naos pier at the Smithsonian Tropical Research Institute;
- repairing the freight elevator in the Quadrangle Building;

- painting structures at several locations at the Smithsonian Tropical Research Institute;

- repairing sidewalks, parking lots, garages, and roads at various locations;

- making general repairs to off-Mall facilities;

- handling emergency repairs required throughout the Smithsonian.

In addition, the requested funds will allow implementation of improvements to Smithsonian properties to provide consistent public amenities and visual cohesion among buildings on the Mall, such as pedestrian and vehicular movement, signage, disabled access, and rest and relaxation areas.

Facade, Roof, and Terrace Repairs ($6,520,000) - Maintaining the integrity of the exteriors of all Smithsonian buildings is critical. This maintenance will prevent major structural and interior damage and deterioration due to age, water intrusion, and weathering. Proper care will ensure a safe environment for visitors, staff, and collections. In addition, energy conservation and environmental control demand weather-tight exteriors. Work in this category includes a variety of projects accomplished cyclically according to the life of the materials used. For example, roofs need replacing nearly every 20 years; facade joints need recaulking and repainting about every ten years; and window frames and other exterior trim need repainting every five years. Several Smithsonian buildings now require extensive restoration.

For FY 1995, the Institution requests $6,520,000 for facade, roof, and terrace repairs. Planned projects include:

- repairing or replacing windows and skylights at the Air and Space Museum, the Cooper-Hewitt Museum, and in the cafeteria of the American History Building;

- repairing or recaulking stonework at the Smithsonian Institution Building, the Air and Space Museum, and the American Art and Portrait Gallery Building;

- repairing or replacing roofs and facades at the Paul E. Garber Facility and the Cooper-Hewitt Museum;

- repairing the ice melt equipment in the walkways around the American History Building; and

- repairing and painting wooden and metal facades and building elements at a variety of locations.

Fire Detection and Suppression Projects ($765,000) - A major Institutional priority is to provide fire protection and safety measures meeting today's standards with state-of-the-art

technology. Smithsonian staff has developed a fire protection master plan for every major Smithsonian facility. The Institution has completed much of the required work, and in several buildings needed improvements will be incorporated into the Major Capital Renewal projects. For FY 1995, the request of $765,000 will continue fire protection master plan work in the American Art and Portrait Gallery Building with installation of an addressable fire alarm-detection system. Fire protection improvements at the Research Branch of the Museum of the American Indian will include installation of sprinklers and an addressable alarm system to pinpoint the exact location of a fire. At the Smithsonian Tropical Research Institute, work will include the installation of smoke detection and sprinkler suppression systems at the Naos site and booster systems to increase water pressure at Naos and Barro Colorado Island.

Access, Safety, and Security Projects ($5,615,000) - The Institution continues to emphasize providing better access to its facilities for persons with disabilities, improving environmental conditions for the health and safety of visitors and staff, and correcting facility conditions that threaten the security of the National Collections.

For FY 1995, the Institution requests $5,615,000 for a number of important projects in these areas. Among the work planned to correct unsafe or hazardous conditions in its buildings are:

- continuing the asbestos abatement program throughout the Institution and a specific project to decontaminate Building 17 at the Silver Hill Facility;
- correcting a serious emergency exit problem at the American Art and Portrait Gallery Building;
- correcting ventilation problems in the hazardous materials storage area and installation of exterior handrails at the American History Building;
- modifying interior fire-rated doors in the Quadrangle Building; and
- modifying the ventilation equipment serving the paint spray booth and carpenter shops at the Sackler Gallery to eliminate air quality problems.

The Smithsonian will continue a multi-year project to correct a number of deficiencies that impede accessibility to public spaces and amenities by persons with disabilities. The work will include improving entry by wheelchair, eliminating obstructions and overhead hazards, correcting elevator deficiencies, changing placement of drinking fountains, improving emergency warning systems, and providing seating space for wheelchair users and listening systems for the hearing impaired. In addition, the Institution will repair and modify elevators at the Natural History Building to ensure they meet applicable life safety and accessibility codes.

Projects for FY 1995 to improve security of the collections, staff, and visitors include:

- continuing the project to improve illumination around buildings and in parking lots on the Mall for more effective surveillance;

- installing closed circuit television cameras and monitors in the Museum of American History's Archives; and

- installing security conduit at the McAlpin-Miller and Fox houses of the Cooper-Hewitt Museum to connect them to the security control room in the Carnegie Mansion.

In addition, a project planned for the Research Branch of the Museum of the American Indian in New York will install emergency interior lights, exterior lighting and surveillance equipment, a card access system, closed circuit television equipment, and a guard post to improve safety and security of the building.

Utility Systems Repairs ($2,160,000) - Funds in this category will maintain, repair, and upgrade the heating, ventilating, and air conditioning systems and plumbing, electrical, and communications systems throughout the Institution's facilities. Ongoing renovations, repairs, and replacement of deteriorated equipment components are essential for ensuring reliable and energy-efficient operation of utility systems. The long-term preservation of the National Collections depends upon stable temperature and humidity conditions.

Energy management remains a high priority at the Smithsonian. Energy conservation gains from adjusting equipment and modifying operations have already been implemented. Significant energy savings opportunities remain through upgrading HVAC systems, replacing obsolete equipment, and extending central automated controls for existing systems. The Institution modifies existing HVAC systems to accommodate programmatic growth, changes in the use of buildings, and the environmental needs of collections as they become better understood. The Institution uses an integrated approach to plan for long-range, systematic HVAC improvements that will meet museum environmental requirements in an energy-efficient manner.

Comprehensive HVAC studies and energy audits for most of the buildings facilitate planning for improvements. The scope of HVAC studies includes field investigations of age, condition, efficiency, and performance of existing equipment, controls, and current operating conditions; reviews of existing drawings, specifications, operating manuals, and hygrothermograph records; and assessments of programmatic needs for environmental control. The data gathered by these studies provide a basis for determining redesign or replacement needs of existing HVAC systems; developing construction cost estimates; identifying favorable payback opportunities; and establishing priorities for the repair, replacement, or modification of equipment components such as air-handling units, refrigeration machines, cooling towers, heat exchangers, automatic temperature and humidity controls, pumps, pipes, fans, filters, ductwork,

and related electrical and plumbing systems. At the same time, energy audits investigate factors relating to energy use, such as power-consuming equipment and building conditions (doors, windows, insulation, floors, and partitions). After identification of energy conservation opportunities and evaluation of costs and potential energy savings and utility rebate programs, plans will guide the renovation and improvement work. This process identified a number of system replacements that the Major Capital Renewal subaccount will fund in addition to minor repairs and renovations requested in the Utility Systems Repairs category.

Funding of $2,160,000 requested in FY 1995 in this category will support routine repair, replacement, and modification projects. These projects include:

- repairing electrical systems at the Paul E. Garber Facility;
- repairing plumbing systems at the Smithsonian Institution Building and the Research Branch of the Museum of the American Indian;
- repairing or replacing mechanical (HVAC) equipment at the Environmental Research Center and the McAlpin-Miller and Fox houses of the Cooper-Hewitt Museum;
- renovating the rest rooms in the north lobby of the Natural History Building and expanding rest room facilities on the second floor of the American History Building;
- continuing installation of a communications raceway system serving the staff offices in the Natural History Building and replacing old communications wiring at the Cambridge, Massachusetts, facilities of the Smithsonian Astrophysical Observatory;
- replacing the hydraulic freight lift at the east entrance to the Arts and Industries Building.

Advanced Planning and Inspection ($2,000,000) - Funds in this category support projects to identify and analyze long-range repair and restoration needs and to design future-year projects in advance of funding requests. The amount of $2,000,000 requested in FY 1995 will allow the Smithsonian to contract for planning and design of projects in the backlog of essential maintenance and repair.

The significant increase in funding in this category over earlier years reflects the Institution's commitment to reducing the backlog more quickly by improving planning and cost estimating and reducing costs in the R&R program. The ability to identify, in advance of funding requests, the precise requirements and costs of individual projects is key to the success of this effort. Thorough planning and development of design concepts will provide detailed

estimates and identify logistical considerations that will allow staff to plan repair strategies and establish immediate and long-range budget requirements. In addition to improving the accuracy of cost estimates, design of projects in advance of funding will save the Institution in escalation costs by enabling the staff to award construction contracts as soon as resources are appropriated. Needed repairs will also be accomplished much sooner, thus preventing further deterioration and ensuring faster compliance with codes.

The funding level requested for FY 1995 will allow Smithsonian staff to complete planning and design in advance of appropriations for a large portion of the projects to be included in the FY 1996 R&R program and will permit preliminary design of some of the projects expected to be in the FY 1997 program as well. The Institution will request amounts in future fiscal years for advanced planning and design to allow preliminary design of the majority of projects in the R&R program prior to budget request. Greater advanced planning and design capability will improve significantly the overall cost effectiveness of the R&R program and will speed the reduction of the backlog of essential maintenance and repair work.

Repair and Restoration of Buildings
FY 1995 – FY 1999

PROJECT TITLE AND ESTIMATED COSTS		FY 1994 FUNDING Federal	OUTSIDE FUNDING Non–Fed	FY 1995 REQUEST Federal	FUTURE FEDERAL REQUESTS FY 1996 Total	FY 1997 Total	FY 1998 Total	FY 1999 Total	Outyear Costs
Title: Major Capital Renewal									
Cost:	14,500,000	1,350,000		14,500,000	20,000,000	16,500,000	24,500,000	23,900,000	80,400,000
	TOTAL: $14,500,000								
Title: General Repairs									
Cost:	3,440,000	5,785,000		3,440,000	4,605,000	9,820,000	7,160,000	3,100,000	4,200,000
	TOTAL: $3,440,000								
Title: Facade, Roof and Terrace Repairs									
Cost:	6,520,000	2,985,000		6,520,000	8,035,000	2,640,000	4,230,000	4,420,000	960,000
	TOTAL: $6,520,000								
Title: Fire Detection and Suppression									
Cost:	765,000	1,140,000		765,000	250,000	920,000	475,000	50,000	550,000
	TOTAL: $765,000								
Title: Access, Safety and Security									
Cost:	5,615,000	6,880,000		5,615,000	4,825,000	4,645,000	4,100,000	5,070,000	4,685,000
	TOTAL: $5,615,000								
Title: Utility System Repairs									
Cost:	2,160,000	4,225,000		2,160,000	1,640,000	2,410,000	280,000	360,000	1,605,000
	TOTAL: $2,160,000								
Title: Advanced Planning and Inspection									
Cost:	2,000,000	1,635,000		2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
	TOTAL: $2,000,000								
Title: TOTAL									
Cost:		24,000,000		35,000,000	41,355,000	38,935,000	42,745,000	38,900,000	94,400,000
	TOTAL: $35,000,000								

Construction

1993 Appropriation.....$16,686,945
1994 Estimate.....$10,400,000
1995 Estimate.....$62,747,000

The FY 1995 appropriation request for Construction represents an investment in the Institution's long-range program goals. The Institution has significant requirements for physical plant expansion and modification to support program needs, particularly in the area of collections storage and care. The Smithsonian staff has assembled these needs into a comprehensive long-range capital improvement program that will phase solutions over the next decades. The FY 1995 Construction request addresses some of the most urgent components of this program. Funding of these projects is essential to maintain vitality in the Institution's far-reaching programs of research, collections management, public exhibitions and education, and other services.

This year's Construction request is as follows:

MAJOR CONSTRUCTION	
Air and Space Museum Extension	$4,000,000
American Indian Museum Facilities	
Cultural Resources Center	41,547,000
Mall Museum	4,000,000
Natural History East Court Building	8,700,000
SUBTOTAL, MAJOR CONSTRUCTION	58,247,000
GENERAL CONSTRUCTION PLANNING	500,000
MINOR CONSTRUCTION, ALTERATIONS, AND MODIFICATIONS	4,000,000
TOTAL	$62,747,000

MAJOR CONSTRUCTION

Air and Space Museum Extension ($4,000,000) - On August 2, 1993 President Clinton approved Public Law 103-57 authorizing the Institution to plan and design the Air and Space Museum Extension at Washington Dulles International Airport and authorizing appropriations of $8 million for this purpose. This facility will permit all of the collections currently stored at the Museum's Garber facility and all airplanes, spacecraft and other artifacts kept outdoors at other sites to be safely housed in structures built to museum standards. It also will provide a restoration and exhibit production facility capable of handling the largest artifacts in the collection in full view of visitors and facilities for visitor services.

The National Air and Space Museum (NASM) currently faces a critical shortage of facilities that threatens to cripple its basic collecting program. In the 43 years of its existence, the Museum has brought together the most significant collection of aircraft and spacecraft in the world. The Museum exhibits and stores its collection of aircraft and spacecraft and related artifacts in the Mall building and at the Paul E. Garber Facility in Suitland, Maryland. These buildings are filled to capacity, despite deliberate steps to limit the growth of the collections. A number of significant items can now be accommodated only outdoors, where they are constantly subjected to the highly destructive effects of precipitation and other environmental elements. The enormous size of contemporary aircraft and spacecraft also prevents the Museum from adding important artifacts to its collections. A number of aircraft that belong with the collections cannot be stored at either site because it is physically impossible to transport them from the airfield to which they would be delivered without severing the wings from the fuselage. The Institution risks severe damage to the artifacts, as well as discontinuity in its collections, if appropriate space for storage of significant larger artifacts is not found.

The advanced age and deteriorated condition of the Suitland buildings further jeopardizes preservation of the Museum's collection. The Garber Facility includes approximately 23 temporary metal structures, many of which date from the late 1940s and early 1950s. A recent building survey completed as part of the Suitland Master Plan estimated the future lifespan of most of these buildings as between 10 and 15 years. Furthermore, the buildings do not provide the controlled climatic conditions necessary for preservation of most museum artifacts.

In addition to storage and acquisition problems, artifact size has dictated exhibit limitations as well. The Museum cannot display, even in modest spaces open to the public, a number of significant aircraft and spacecraft now in its collections because they are too big and too heavy for the Mall building. These include the Boeing 367-80 (prototype for the 707), Vought XF8U Crusader, Lockheed Superconstellation, Boeing Flying Fortress, Sikorsky S-43 Flying Boat, the B-29 Enola Gay, the space shuttle Enterprise, and the SR-71 Blackbird. The need to make these aircraft and spacecraft available to visitors in order to portray the significance of advances in aerospace technology is a critical requirement for the Museum. Although the proposed Extension is primarily a collections facility, some display and storage

space will enable visitors to view aircraft and spacecraft and understand the social, environmental, and scientific changes they have fostered.

Preliminary estimates for construction costs for the NASM Extension approach $162 million, in 1993 dollars. The Institution requests $4 million in FY 1995 to begin detailed planning and design. In addition to Federal appropriations, this project will be supported by a combination of efforts. Confirmation of commitments for support of this project in the form of bonds and interest-free loans have recently been made by the Commonwealth of Virginia.

American Indian Museum Facilities ($45,547,000) - Public Law 101-185 authorizes the Institution to provide facilities for the Museum in three locations:

- an exhibition and education facility located in a portion of the Alexander Hamilton U.S. Custom House in lower Manhattan, to be known as the George Gustav Heye Center;

- a collections study, reference, and support facility on the same site as the Museum Support Center in Suitland, Maryland known as the Cultural Resources Center.

- a major museum building to be constructed on the Mall in Washington, D.C., on land reserved for Smithsonian use by Congress in 1975;

Four major sources of funding support the construction of these facilities: New York City, the State of New York, Federal appropriations, and private donations. The Institution received an appropriation in FY 1990 for programming and planning for all three facilities and for design of the Custom House conversion.

Since FY 1991, the Smithsonian has received $13,513,000 to prepare the Custom House space, begin design of the Suitland building and the Mall museum, and complete planning and programming for the new Museum as a whole. The George Gustav Heye Center in New York City is currently under construction, with funds jointly provided by New York City, the State of New York, and Federal appropriations. The public opening of this facility is planned for late 1994. The Smithsonian requests $45,547,000 for FY 1995 to continue development of the Museum's facilities, as described below.

- Cultural Resources Center ($41,547,000) - The Institution plans to construct a facility adjacent to the Museum Support Center in Suitland, Maryland, to provide proper housing and study for the collections of the National Museum of the American Indian. The one million cultural artifacts in the Heye Collection are now densely warehoused and largely inaccessible in the Bronx storage facility in New York, and library, film, and archival collections (about 250,000 items) are located elsewhere in the City. In addition to conservation, preservation, and collections-related research and training activities, the Suitland building will house exhibit development and other nonpublic functions, thus freeing space in the future Mall Museum for public activities. Based on a construction start in 1994, the facility is projected to cost

approximately $50 million to design, build, and partially equip. NMAI plans to apply a portion of its Salaries and Expenses resources to complete collection equipping requirements over several years.

The Smithsonian used $300,000 appropriated in FY 1990 to complete planning for the building. This planning has identified a specific site and building configuration, details such as geotechnical data, and construction cost estimates and schedules. Using $1,953,000 appropriated in FY 1991 and FY 1993, design is now under way. The $6,200,000 expected in FY 1994 is to complete design and to begin preparation of the site. The Institution requests $41,547,000 in FY 1995 for construction of the building. A portion of this amount (about $4.5 million) will purchase the first increment of furnishings and equipment for the building. Completion of the building, scheduled for FY 1997, will provide a "home" for the Museum's collections and space where Native American visitors can interact with them in appropriate settings, create a focal point for tribal and international outreach programs, and establish vital support for the installation and continued operations of exhibits and public programs in the Mall Museum.

- The Mall Museum Building ($4,000,000) - The Institution will construct a new building on the National Mall near the foot of Capitol Hill, adjacent to the world's most frequently visited museums. The location will provide excellent exposure for Native American artifacts and related museum activities centered on Native American culture. This facility will house permanent and changing exhibitions, reference and resource areas, an auditorium and conference center, integrated performance and retail areas, and space for other public programs.

The Institution projects the total cost of construction of the Mall building to be approximately $110 million, assuming a construction start in the mid-1990s. The Smithsonian plans to fund two-thirds of the cost from Federal sources and expects that the balance will result from a national fund-raising campaign. The National Museum of the American Indian recently completed a series of consultations with Native American communities to define the programs of the new Museum as well as generate ideas about the physical characteristics of the building. With $1,150,000 received in FY 1990 and FY 1991, the Institution will complete overall programming and planning for the new Museum and detailed planning for the Mall Museum building. The detailed planning will incorporate the considerations identified by Native American groups. The Institution will use $2,110,000 received in FY 1992 and FY 1993 for conceptual design of the Mall building and the nonappropriated funds in FY 1994 to continue design. The Institution requests $4,000,000 in FY 1995 to complete the design. The total design effort will take up to three years, with construction scheduled to begin in FY 1997; completion of the building in FY 2000; and its public opening in the year 2001.

Natural History East Court Building ($8,700,000) - The Natural History Building on the Mall houses more than 1,200 employees of the Smithsonian Institution and several Government agencies engaged in related biological research. Each year these individuals conduct basic collections-related research in a broad range of subjects critically important in advancing

scientific knowledge related to humankind and the environment. In addition to the large force of scientific staff and other personnel, the building also houses substantial collections, numbering well over 120 million biological specimens and anthropological artifacts, and 30 public exhibition halls with space for associated educational and outreach activities. A number of other Smithsonian organizations also occupy the building, including the Smithsonian Institution Libraries and the Office of Plant Services.

The National Museum of Natural History (NMNH) faces two significant challenges regarding space for the immediate future: accommodating a total building renovation of the heating, ventilating, and air conditioning (HVAC) system and relieving severe overcrowding. The Museum proposes to meet these two challenges by constructing a building inside the Natural History Building's East Court to resolve both space problems. The new in-fill building will interconnect directly with the existing building and ultimately become an integral part of the Natural History Building.

During the HVAC renovation project, the East Court Building will add approximately 80,000 net square feet to the Natural History Building. This space will serve both as swing space for temporary relocation of offices, laboratories, and collections and as space for the permanent relocation of functions now housed elsewhere in the Natural History Building. The space vacated by the permanent relocation of activities to the East Court Building will also become swing space for the HVAC renovation project. The result is 80,000 net square feet available within the building for swing space during the renovation project. Although this amount falls short of the estimated need, the Museum can manage the necessary relocations by temporarily compressing some of the activities and collections within the Natural History Building and by using a limited amount of exhibition space for the duration. The Museum also will use space in the attics freed by the move of collections to the Museum Support Center as additional swing space during renovation, assuming sufficient staff is made available to prepare the artifacts for the move, as requested in the Museum Support Center's Salaries and Expenses budget. At the end of the HVAC construction period, the Museum will have 80,000 square feet of permanent space to accommodate currently overcrowded research laboratories, offices, collection areas, and public exhibition, education, and other outreach and Institution support activities.

The estimated cost of design and construction of the East Court Building is $25 million. This estimate includes the cost of relocating the greenhouse, osteology preparation laboratory, building trades shops, and hazardous waste storage located in buildings presently in the East Court. The estimate for furnishing and equipping costs is an additional $5 million. In 1990, Congress enacted Public Law 101-455, authorizing the Institution to construct this new building and authorizing appropriations totaling $30 million.

The Institution completed the necessary planning for the new building in early FY 1991, using Construction Planning funds, and is using $1,492,000 appropriated in FY 1991 for design. The $9,874,000 appropriated in FY 1992 and the $9,914,000 received in FY 1993 will allow award of the construction contract in the summer of 1994 to meet the critical path schedule for

the HVAC renovation project. However, appropriation of the remainder of the construction amount is essential to fully fund the contract, and equipping funds must be available in FY 1995 to ensure the building can be occupied on schedule. The Institution therefore requests $3,700,000 in FY 1995 to complete construction and $5,000,000 for equipping the building.

GENERAL CONSTRUCTION PLANNING ($500,000) - An essential part of effective program management is the ability to assess requirements and priorities and develop long-range plans. For FY 1995, the Smithsonian requests $500,000 to continue to develop its long-range capital improvement plans in tandem with its programmatic goals. The planning process will result in better-defined plans and better cost estimates for future-year construction projects prior to authorization and budget requests. This funding will ensure continued feasibility studies, planning, and concepts upon which to base precise designs and more accurate cost estimates for construction of these and other emerging requirements. With these resources, the Institution will also establish operating and logistical support requirements, make required environmental assessments for critical capital improvement projects, and develop materials for review commission and Congressional approval.

MINOR CONSTRUCTION, ALTERATIONS, AND MODIFICATIONS ($4,000,000) - Projects in this category include:

- minor new construction (under $1 million in estimated cost);
- alterations and modifications to buildings to meet programmatic objectives in the areas of research, collections management, exhibitions, and public services.

For FY 1995, the Smithsonian requests $4,000,000 for projects in this category. For the first time, the Institution requests approval of a larger number of projects than can be funded with this amount. Funding in this way will provide more flexibility in the application of the funds to the highest priority projects and will allow redirection of funds saved on one project to the next in line without additional approval. For FY 1995, the Institution requests approval of the projects described below. The projected cost of these projects is $7,500,000.

American Art and Portrait Gallery Building ($570,000) - With $390,000 appropriated in FY 1992, the National Museum of American Art began modifying space occupied by the Office of Research and Fellows by installing a mezzanine level and a materials handling lift between the levels. An additional $570,000 is requested in FY 1995 to install storage screens in the space and to renovate an adjacent fourth floor space. Improvements will include upgrading the HVAC systems to provide better control of temperature and humidity; installing new level floor materials to clear access ways and provide a flat surface for storage units; waterproofing the storage room floor; installing water detectors; and improving lighting. In addition, the Museum will consolidate existing and new storage screens in the space. The new arrangement of art storage screens will allow more effective utilization of the space while preserving convenient access to the paintings by staff and researchers.

American History Building ($275,000) - The Museum of American History currently stores a number of collections items in the basement of its Mall building, making them vulnerable to water damage if severe flooding were to occur. The Museum plans to relocate the majority of collections from the basement to leased space in Newington, Virginia, the Museum Support Center in Suitland, Maryland, and other areas of the building. The Museum will then use the basement space to consolidate exhibits and registrarial functions now scattered throughout the building. The Museum will use $100,000 expected in FY 1994 to begin relocation of collections from the basement. The Institution requests $275,000 in FY 1995 to begin modifying the basement space to accommodate the new staff functions.

American Indian Museum, New York City ($300,000) - The Smithsonian requests $300,000 for two projects at the National Museum of the American Indian: modifying space to accommodate photo, film, and video operations, and creating storage and office space to support archival activities.

NMAI is scheduled to vacate the Audubon Terrace building in early FY 1995 when many of its functions relocate to the George Gustav Heye Center. The photo, film, and video collections and the Museum's paper archives are scheduled to move to the Cultural Resources Center in Suitland, Maryland, when that facility is completed in FY 1997. However, these collections and the staff that work with them must be accommodated in the New York City area until that time. The Museum plans to modify space in the Research Branch to meet the specific requirements of each collection relocated from Audubon Terrace. The Institution requests $250,000 in FY 1995 to design and construct the photo, film, and video collection facility, and $50,000 for the archives. The photo, film and video collection area will include refrigerated collections storage, a studio and darkroom, and offices. The archives area will include collections storage and staff offices. Funding of these projects will allow the Museum to continue to work with these key portions of its collections without incurring operating costs that would be required to remain in the Audubon Terrace building past the current closure date.

Anacostia Museum ($250,000) - The Smithsonian requests $250,000 to construct a mezzanine above the education offices to accommodate expanding staff, collection study and storage, and museum programs. Plans for the museum addition built in 1987 included provision for this mezzanine. The work will involve architectural, structural, electrical, and mechanical alterations. The project will also include installation of an elevator to provide access for persons with disabilities to the new mezzanine, as well as to other levels of the building. The Institution will use $200,000 appropriated in FY 1993 and $400,000 expected in FY 1994 to initiate the mezzanine project. For FY 1995, $250,000 is requested to complete this renovation.

Hirshhorn Museum Building ($200,000) - Since the Hirshhorn's opening in 1974, the collection has grown to more than 13,000 pieces. Only a small percentage of the collection is on display at one time and the Museum has closed gallery space to accommodate collections storage requirements. Insufficient space also causes the collections to be stored too closely to allow proper access by staff for care and study. The Smithsonian requests $200,000 in FY 1995 to begin evaluation and implementation of a series of space modifications to make more

effective use of the limited available storage space. The work will include installation of compact storage systems where feasible and changes to lighting, mechanical, electrical, fire protection, and security systems. Funding of this project will improve storage conditions of the Museum's collections and return gallery space to public use.

Natural History Building ($1,000,000) - The Institution requests $1,000,000 in FY 1995 for two projects at the Natural History Building: renovation of the west loading dock and miscellaneous space modifications throughout the Museum.

Over the coming years, the Major Capital Renewal project, East and West Court construction, exhibit reinstallation, move to the Museum Support Center, and other ongoing activities at the Natural History Building will increase significantly the demand for loading dock space. During construction of the East Court Building, the east loading dock will be out of service and the west loading dock will be the sole receiving and shipping area for construction materials, the Museum's collections, and other supplies. The west dock is also presently the main entry and processing point for the Institution's mail service. The Smithsonian plans to relocate the mail service operation to renovated space at its leased building at 1111 North Capitol Street. The Museum will then demolish the partitions in the mail service space to increase maneuvering room and install additional hydraulic lifts to make all three loading bays fully functional. The renovated dock will also include appropriate space for temporary housing of combustible waste materials generated by the Museum. The Institution requests $500,000 in FY 1995 for this project. Completion of this work will relieve a serious bottleneck in the moving of collections and materials into and out of the building.

The Institution requests funding to continue modifications to office and laboratory space at the Natural History Building. Authorized National Museum of Natural History (NMNH) staff has almost doubled in the past 20 years. Many research students, scholars, and visiting scientists also occupy space in the building. The main portion of the building was constructed more than 80 years ago and the wings more than 25 years ago. Although some modifications have been made to the building over the years, its present configuration does not serve the current staff and Museum functions well. The Museum must renovate the building to accommodate the large increase in staff. In addition, advanced technology and equipment now in use in research require specialized building modifications. These modifications will allow the Museum to maintain its ability to use technologically complex equipment to advance its basic mission.

The continuing transfer to the Museum Support Center (MSC) of NMNH's collections and the relocation of many staff of the U.S. Geological Survey out of the Natural History Building present an opportunity to reorganize, renovate, and reconfigure the space within the building and relieve major space problems. The Museum is using $392,000 received from FY 1991 through FY 1993 to provide high-quality renovated space within the building for several functions. These include offices for the Biodiversity Program, East Court planning staff, and fossil analysis, as well as conference space for a variety of users. The Museum is also enlarging the administrative offices with space gained by the removal of collections storage

cases in the corridor. For FY 1995, the Institution requests $500,000 to continue space modifications in the building.

Silver Hill Facility ($1,505,000) - The Smithsonian requests funding in FY 1995 for four projects to improve storage conditions at the Paul E. Garber Facility: renovation of Building 17, installation of environmentally controlled chambers in Building 21, installation of HVAC systems in several buildings, and construction of an artifact storage building for Air and Space and American History collections.

Building 17 at the Paul E. Garber Facility in Suitland, Maryland, provides critical collections storage for the National Museum of American History. The artifacts stored in the building do not require carefully controlled climatic conditions. The building, however, needs some improvements to ensure secure storage in a relatively stable environment. Moreover, the building contains asbestos insulation, which has contaminated the objects stored there. Decontamination of the artifacts and removal of the asbestos must precede these improvements. The Institution used $325,000 provided in FY 1990 for planning of the renovation project and contract document preparation. The Institution will use $150,000 provided in FY 1993 to construct a decontamination chamber outside the building, where Museum staff will clean asbestos from the artifacts. Funds requested in the Repair and Restoration of Buildings account will relocate the artifacts and remove the asbestos from the building itself. Once decontamination is complete, the Smithsonian will use $400,000 expected in FY 1994 to begin the renovation. The proposed work involves repairing and insulating walls and roof, upgrading electrical wiring and fixtures, and installing new space heaters and smoke detection and sprinkler systems. The Institution requests $55,000 in FY 1995 to continue the work.

The National Air and Space Museum also stores collections at the Garber Facility. A portion of Building 24 currently houses, under environmentally controlled conditions, fragile artifacts made from materials such as fabric, leather, rubber, and some metals susceptible to corrosion. Such artifacts can deteriorate rapidly when not stored under controlled conditions, and they are subject to damage by pests, dust, and pollution. The climate-controlled chamber in the building is now overcrowded, and the Museum has had to halt acquisition of these kinds of artifacts. The Museum plans to install two additional prefabricated refrigerated rooms, one of which will be built on a mezzanine over the other. The Museum will complete the work in two phases. The Institution requests $200,000 in FY 1995 for the first phase, which will install a refrigerated room at ground level and the frame for the mezzanine. The Smithsonian will request funding in a future year for Phase 2 installation of mezzanine decking and the second refrigerated room.

The Silver Hill Facility was constructed more than 40 years ago and provides storage space for Smithsonian collections of several museums. Most of the buildings are not climate controlled and are in very poor condition generally. The Institution plans to replace these buildings with state-of-the-art storage facilities on the adjacent site of the Museum Support Center. However, this is a long-term solution to the Institution's immediate need for environmentally stable storage space for the collections. The Institution therefore proposes to

install basic heating, ventilating, and air conditioning (HVAC) systems in several of the Suitland buildings to house the most sensitive of the collections now stored there. The staff will coordinate the HVAC installation with other repair work on the buildings to minimize damage to the collections, which must be relocated to other buildings during construction. The Smithsonian requests $350,000 in FY 1995 to begin HVAC work. Funding of this project will provide a workable interim solution to the Institution's shortage of environmentally stable space for storage of museum collections.

The Institution also requests $900,000 in FY 1995 to construct an additional storage building to house collections of the National Museum of American History and the National Air and Space Museum. The collections storage buildings at Silver Hill cannot accommodate current storage requirements. The two museums have collected important artifacts over the past 15 years, and the buildings are filled to capacity. Additional acquisitions require further compression of collections presently stored in the buildings and expose artifacts to potential damage from unstable environmental conditions and insect and rodent infestations in the buildings. The requested funds will construct a metal building with necessary mechanical, electrical, and security systems. Construction of this building will provide interim storage of museum objects until the Institution completes permanent storage space proposed at the National Air and Space Museum Extension at Dulles International Airport and the Suitland Collections Center.

Smithsonian Astrophysical Observatory ($230,000) - For FY 1995, the Institution requests funding for construction of an enclosure for the Infrared Optical Telescope Array (IOTA) at the Fred L. Whipple Observatory in Arizona and for miscellaneous modification projects at all Smithsonian Astrophysical Observatory (SAO) locations.

The Smithsonian is part of a five-institution consortium to deploy an Infrared Optical Telescope Array (IOTA) on Mt. Hopkins in Arizona. The IOTA will combine received light from smaller telescopes positioned on piers at predetermined locations and process the signal with newly developed optical detection and computer synthesis techniques. IOTA will permit scientists to see distant stellar objects with much finer detail and thereby gain greater insight into the fundamental processes of the universe. The telescopes must move from pier to pier to simulate the reception from a variety of receivers. SAO used $605,000 received in FY 1992 and FY 1993 to design and construct the IOTA Central Facility and two of the three shelter-transporter vehicles and telescope piers. The Institution requests $100,000 in FY 1995 in a final phase to construct the third shelter-transporter for the IOTA telescopes. Funding of the IOTA project will help keep SAO at the forefront of astrophysical research and fulfill its obligations to other consortium parties who have provided substantial additional funding for this program.

The Institution also requests $130,000 in FY 1995 to provide funding for necessary but unanticipated modification projects at all SAO locations which arise annually but cannot always be anticipated. SAO is widely recognized as a leader in astrophysical research and receives numerous grants and contracts from other Federal and private sector agencies. The field of astronomical and astrophysical research experiences rapid growth and changes with each new

discovery. To keep pace with scientific discoveries and advances in technology, the research programs and priorities at SAO must change rapidly requiring appropriate modifications to facilities. The Institution therefore requests funding for miscellaneous small alterations and modifications to SAO facilities. SAO will use the requested funds for such projects as the UVCS Data Analysis Center in Cambridge, Massachusetts, which will correlate data for the ultraviolet corona spectrograph experiment expected to be launched on the space shuttle in mid-1995, and modifications to the interior of the 60"/48" telescope building at the Whipple Observatory in Arizona, to support modern computer and electronic data interchange systems.

Smithsonian Environmental Research Center ($850,000) - For FY 1995, the Institution requests funding for additional laboratory modules at the Mathias Laboratory and modification of the approach road to the core laboratory complex at the Smithsonian Environmental Research Center (SERC) in Edgewater, Maryland.

Since FY 1991, the Institution has received funding in the Construction account to add a series of four laboratory modules that will connect the new wing of the Mathias Laboratory to the present library. These four modules will provide critically needed laboratory and support space for several of SERC's research programs. These groups must now conduct research in makeshift laboratory spaces in temporary trailers or in commercial leased space remote from the study sites. Funds appropriated through FY 1993 ($1,050,000) will provide funding to construct the first two modules and necessary utilities and support space, such as a walk-in cold room, laboratory equipment room, and janitor closet to serve the finished facility. The Institution requests $750,000 in FY 1995 to construct an additional two modules. Completion of the Mathias Laboratory modules will consolidate SERC's research programs at the Rhode River site for more effective and efficient research operations.

The Institution also requests $100,000 in FY 1995 to modify the approach road to the SERC site to provide more direct access to administrative and research facilities. SERC is currently completing a master plan, outlining future facilities development to support ongoing and planned programs. The master plan contemplates future development of a core laboratory complex centered on the Mathias Laboratory and the reconstructed Old Dominion Building. The proposed road will separate traffic to the research facilities from trucks providing delivery and support to the general maintenance buildings and will promote safer, more efficient operations.

Smithsonian Institution Building ($200,000) - The Smithsonian Institution Building houses the Office of the Secretary and other senior management of the Institution. Recent and continuing changes in staff organization require minor modifications to the building to provide the necessary support facilities for staff activities. The Institution began alterations to staff offices with funds received from FY 1991 through FY 1993 ($220,000) and will use the funds expected in FY 1994 ($100,000) to continue this project. The work includes installation or removal of partitions and doors, along with associated mechanical (HVAC), electrical, and communications system modifications. The Institution requests $200,000 in FY 1995 to begin programming and design for renovation of the third and fourth floor space now occupied by the

Woodrow Wilson International Center for Scholars, which will relocate to the new Federal Triangle Building. The staff will coordinate the renovation work with the Major Capital Renewal project in the building.

Smithsonian Tropical Research Institute ($1,625,000) - The Institution requests funding in FY 1995 for three projects at the Smithsonian Tropical Research Institute in Panama: renovation of the space in the Naos Laboratory building now occupied by the maintenance shop, construction of additional staff housing at the Barro Colorado Island site, and renovation of the Ancon Building in Panama City.

The Smithsonian Tropical Research Institute (STRI) is the world's premier center for basic research in tropical biology. Since space adjacent to the ocean is limited, the space in Building 359 at Naos, now occupied by the maintenance shop, is needed as laboratory space for the expanded Marine Sciences Research Program, as well as the molecular biology program. The Institution requests $920,000 to construct a mezzanine and convert the ground floor into laboratories and offices. The requested resources will allow important marine and molecular research programs to continue.

STRI's 1986 Facilities Master Plan calls for construction of additional housing for scientists and staff supporting research programs on Barro Colorado Island. Adequate accommodations are especially needed for researchers, currently housed in substandard accommodations, who work on the Island for extended periods. The Institution completed construction of five buildings and a laundry/lounge building using funding provided in FY 1985 ($895,000), and one more residential unit is under construction with funds appropriated in FY 1991 ($400,000). The Institution requests $470,000 in FY 1995 to construct three additional four-unit dormitory buildings. Completion of staff residences will provide safe, efficient, and comfortable accommodations for those working on the Island.

STRI recently relocated its administrative headquarters from the Ancon Building to the nearby Tupper Laboratory and Conference Center in the Tivoli area of Panama City. The Institution plans to renovate the Ancon Building to provide laboratory space for the Centers for Paleoecology Studies. The Institution used $15,000 received in FY 1989 to design the renovation and requests $235,000 in FY 1995 to complete construction. The funds will install a central air conditioning system and make architectural modifications necessary to construct laboratory-office suites. STRI will coordinate this project with fire protection work and utility repairs funded from the Repair and Restoration of Buildings account.

Alterations and Modifications Planning and Design ($495,000) - For FY 1995, the Smithsonian requests $495,000 to plan and design future Minor Construction, Alterations, and Modifications projects. As in other categories of construction activities, such as Major Construction and Repair and Restoration of Buildings, planning is essential for an effective facilities management program.

SMITHSONIAN INSTITUTION
Long Range Construction Program
FY 1995 – FY 1999

$(Millions) *Major Construction*

PROJECT TITLE AND ESTIMATED COSTS			PRIOR FUNDING Federal	OUTSIDE FUNDING Non–Fed	FY 1995 REQUEST Federal	FUTURE FEDERAL REQUESTS FY 1996 Total	FY 1997 Total	FY 1998 Total	FY 1999 Total	Outyear Costs
	Title: **Natural History East Court**									
	Cost: Plan/Design:	1.5	1.5							
Authorized:	Construction:	23.5	19.8		3.7					
	Equipment:	5.0			5.0					
Yes	**TOTAL:**	**$30.0**								
	Title: **American Indian Museum Cultural Resources Center**									
	Cost: Plan/Design:	6.5	6.5							
Authorized:	Construction:	39.0	2.0		37.0					
	Equipment:	4.5			4.5					
Yes	**TOTAL:**	**$50.0**								
	Inflated to FY 1996 dollars.									
	Title: **American Indian Museum Mall Museum**									
	Cost: Plan/Design:	11.0	3.3	3.7	4.0					
Authorized:	Construction:	89.0		29.0			26.0	34.0		
	Equipment:	10.0		4.0					6.0	
Yes	**TOTAL:**	**$110.0**								
	Inflated to FY 1998 dollars.									
	Title: **Suitland Collection Center**									
	Cost: Plan/Design:	5.7				5.7				
Authorized:	Construction:	0.0								
	Equipment:	0.0								
No	**TOTAL:**	**$5.7**								
	Title: **Air and Space Museum Extension**									
	Cost: Plan/Design:	10.2		2.2	4.0	2.0	2.0			
Authorized:	Construction:	174.8		174.8						
	Equipment:	0.0								
No	**TOTAL:**	**$185.0**								
	Inflated to FY 1999 dollars.									

SMITHSONIAN INSTITUTION
Long Range Construction Program
FY 1995 – FY 1999

$(Millions) *Major Construction*

PROJECT TITLE AND ESTIMATED COSTS				PRIOR FUNDING Federal	OUTSIDE FUNDING Non–Fed	FY 1995 REQUEST Federal	FUTURE FEDERAL REQUESTS FY 1996 Total	FY 1997 Total	FY 1998 Total	FY 1999 Total	Outyear Costs
	Title:	**African American Museum**									
	Cost:	Plan/Design:	1.7		1.7						
Authorized:		Construction:	0.0								
		Equipment:	0.0								
No		TOTAL:	$1.7	Sources to be Determined							
	Title:	**General Post Office Building**									
	Cost:	Plan/Design:	1.7	1.7							
Authorized:		Construction:	0.0								
		Equipment:	0.0								
Yes		TOTAL:	$1.7								
	Title:	**Service Center**									
	Cost:	Plan/Design:	0.0								
Authorized:		Construction:	60.0		60.0						
		Equipment:	0.0								
No		TOTAL:	$60.0								
	Title:	**Natural History West Court**									
	Cost:	Plan/Design:	1.1		1.1						
Authorized:		Construction:	19.2		19.2						
		Equipment:	7.7		7.7						
No		TOTAL:	$28.0								
			Inflated to FY 1996 dollars.								

SMITHSONIAN INSTITUTION
Long Range Construction Program
FY 1995 – FY 1999

$(Millions) *Minor Construction and Planning*

PROJECT TITLE AND ESTIMATED COSTS				PRIOR FUNDING Federal	OUTSIDE FUNDING Non–Fed	FY 1995 REQUEST Federal	FUTURE FEDERAL REQUESTS FY 1996 Total	FY 1997 Total	FY 1998 Total	FY 1999 Total	Outyear Costs
	Title:	**Minor Construction, Alterations and Modifications**		FY 1994							Per Year
	Cost:	Plan/Design:	3.6	0.5		0.5	0.5	0.5	0.5	0.5	0.6
Authorized:		Construction:	31.8	3.5		3.5	4.5	4.7	5.0	5.2	5.4
		Equipment:	0.0								
Yes		TOTAL:	$35.4								
	Title:	**Construction Planning**		FY 1994							Per Year
	Cost:	Plan/Design:	3.7	0.2		0.5	0.5	0.5	0.5	0.5	1.0
Authorized:		Construction:	0.0								
		Equipment:	0.0								
Yes		TOTAL:	$3.7								

Construction Program Summary

	Title:	**CONSTRUCTION PROGRAM TOTALS**									
	Cost:	Plan/Design:	46.7	13.7	8.7	9.0	8.7	3.0	1.0	1.0	1.6
		Construction:	437.3	25.3	283.0	44.2	4.5	30.7	39.0	5.2	5.4
		Equipment:	27.2	0.0	11.7	9.5	0.0	0.0	0.0	6.0	0.0
		TOTAL:	$511.2			62.7	13.2	33.7	40.0	12.2	7.0

Smithsonian Institution
Museum Programs and Related Research
(Special Foreign Currency Program)

PROGRAM OF GRANTS FOR RESEARCH

The Smithsonian Institution, through its Special Foreign Currency Program, makes grants to United States universities, museums, and other institutions of higher learning, including the Smithsonian itself, primarily for research and advanced professional training in fields of traditional Smithsonian competence.

Excess currencies appropriations directly funded the Program through FY 1986. Outlays from the budget authority appropriated through FY 1986, including the Forward-Funded Reserve for the American Institute of Indian Studies, will continue through the 1990s. In addition, since FY 1986 the Smithsonian has received allocations of U.S.-owned Indian rupees from the funds appropriated to the Department of State in FY 1985 for the establishment of the U.S.-India Fund for Educational, Cultural, and Scientific Cooperation.

For the past 27 years, the Special Foreign Currency Program has been a major source of support for research carried out by United States institutions in those countries for which excess foreign currencies are available. The full responsibility for the design, execution, and publication of research results rests with a scholar working within the program of a United States institution. Smithsonian foreign currency grants strengthen the fundamental research and training activities of collaborating institutions abroad, since most projects directly involve host country institutions and scholars. Enduring professional ties, which result from joint efforts and scholarly exchange, contribute to the strongest form of United States cultural relations with other nations. These ties also contribute to the global integration of research data in the sciences. As a result of this interaction, the gap between industrial and developing nations' scholars has narrowed. Moreover, research sponsored by the Program aims, in part, at improving understanding of the environment and the management and conservation of scarce natural and cultural resources that are threatened by the rapid growth of world population and technological development.

In FY 1993, ongoing research supported by these grants included the following projects of special interest:

- archeological and art historical studies at Vijayanagra are revealing the final years of the Hindu kings before the Mughul invasions from the north ended the era;

- documenting of a rich tradition of festivals in the subcontinent, University of California architects are studying the ephemeral architecture developed to support these festivals which become more relevant as demographics change in the U.S.;

- excavations at Arikamedu on the southwest coast of India have pushed back original estimates of Indo-European contact by at least one century to the first century A.D.;

- Sociologists are studying the changes in family structure brought on by modernization in India, and are measuring, in particular, the effect on the elderly who have traditionally been cared for in the home.

Further, with emphasis on the exchange of information through small workshops, symposia, and field conferences, the Program encourages international research in specialized areas. In FY 1993, for example, support was granted for a series of exchange visits and workshops between U.S. and Indian astronomers and astrophysicists.

FORWARD-FUNDED RESERVE FOR THE AMERICAN INSTITUTE OF INDIAN STUDIES

Since 1967, the Smithsonian has provided annual funding through the Special Foreign Currency Program to the American Institute of Indian Studies (AIIS) for its fellowships, research, symposia, and publications programs, as well as its administrative costs. The Smithsonian has helped sustain this Institute and other American research centers abroad for the last 27 years because of their significant contributions to scholarship and science without regard for national boundaries and because of their special service to American scholars.

With Special Foreign Currency Program funding received from FY 1980 through FY 1985, the Smithsonian established a forward-funded reserve of $7,170,000 equivalent in rupees. This reserve enabled the AIIS to sustain its programs after the removal of India from the excess currency list in 1985. Since FY 1986, AIIS, with oversight from the Smithsonian, has drawn upon the funds from this reserve for its fellowship program and administrative costs in India. The Institution continues to examine annual proposals through its peer review system before releasing funds from the reserve account to AIIS. The reserve should support AIIS programs through the 1990s in conjunction with continued support from the U.S.-India Fund. In 1990, the U.S. Congress authorized the deposit of the reserve in interest-bearing (rupee) accounts, a plan that will help to continue the viability of the fund for many years.

U.S.-INDIA FUND FOR EDUCATIONAL, CULTURAL, AND SCIENTIFIC COOPERATION

In FY 1985, Congress appropriated $100 million equivalent in U.S.-owned Indian rupees to the Department of State to establish the U.S.-India Fund for Educational, Cultural, and Scientific Cooperation. Since FY 1986, the Smithsonian has received allocations from this fund to continue programs in India similar to those administered under the Special Foreign Currency Program, which would otherwise have ended when India lost excess currency status in 1985.

The Institution has received a total of $14 million from FY 1986 through FY 1993 and expects to receive $1.4 million in FY 1994 through the U.S.-India Fund. Based on current usage, the fund will be totally liquidated by 1997.

U.S.-INDIA FUND SUMMARY
(millions)

Fiscal Year	Funding Received	Funding Anticipated
1986	$1.40	--
1987	1.50	--
1988	1.80	--
1989	1.75	--
1990	2.50	--
1991	1.85	--
1992	1.60	--
1993	1.60	--
1994	-	$1.40
TOTAL	$14.00	$1.40

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